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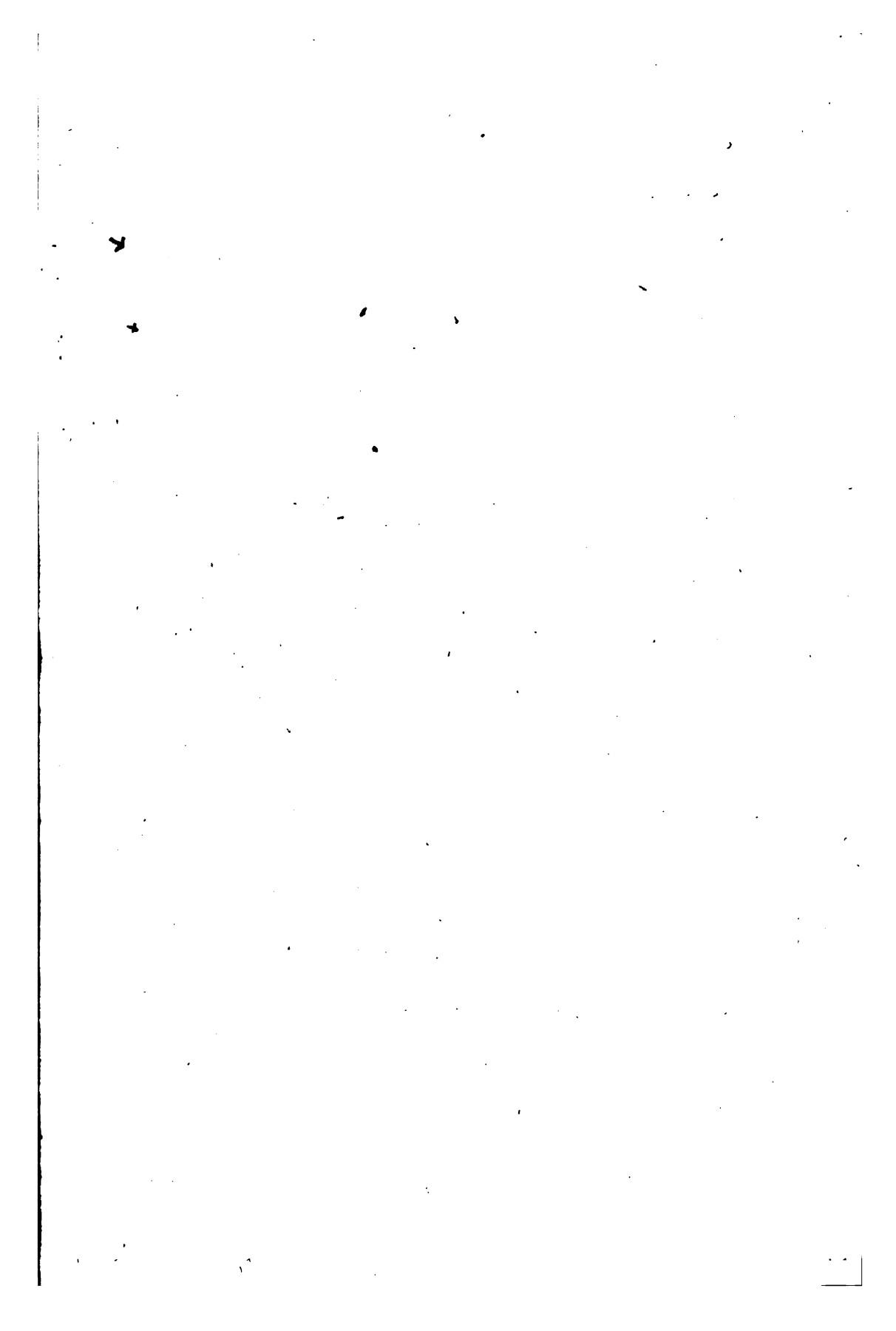
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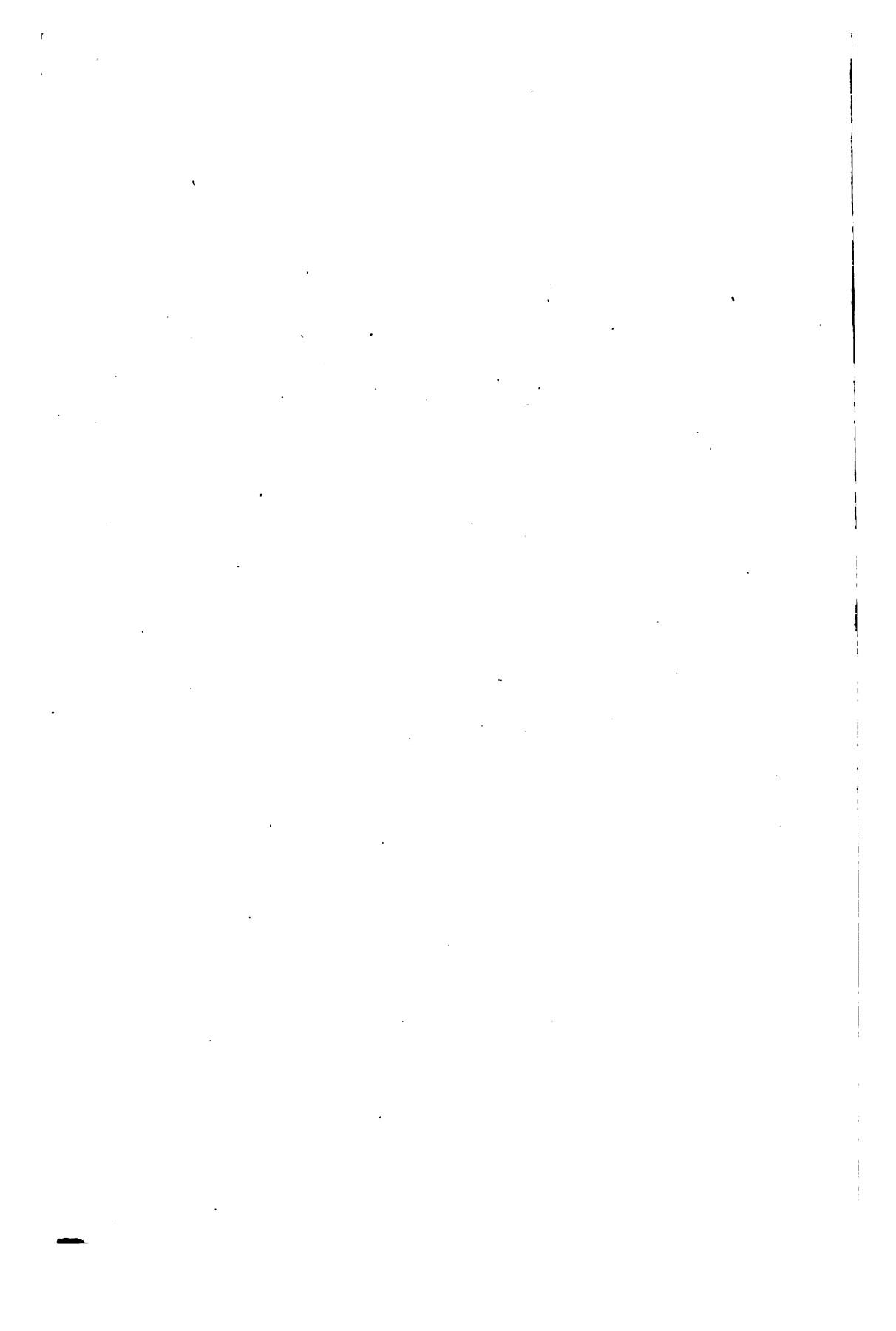
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THE

MINING WORLD INDEX

of Current Literature

VOL. III FIRST HALF YEAR 1913

By GEO. E. SISLEY

Associate Editor
Mining and Engineering World

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Preface

This, the third volume of THE MINING WORLD INDEX OF CURRENT LITERATURE, covers the world's literature on mining, metallurgy and kindred industries for the first six months of 1913. Like the two preceding volumes it embraces all references, of any importance, to the literature of the field it represents. But few changes have been made in this volume, but what have been made will surely meet with the approval of those who have occasion to use it, as these changes will better enable them to keep in easier touch with the progress that has been made in mining, metallurgy, etc., during the half year covered.

A notable change, or rather addition, is the publication of a list of the periodicals indexed, as well as the various schools and societies and government departments whose publications are devoted to mining or any of its allied industries. While this list does not include all publications indexed, yet there will be found a large majority of the world's leading publications. It is published for the purpose of informing the reader what periodicals have been regularly indexed, thereby saving him the trouble of hunting for the particulars of date, etc., concerning a paper which, according to his indefinite recollection, had appeared in some periodical not among the exchanges of *Mining & Engineering World*.

We still make no claim that the work is perfect, yet we are led to believe, by the numerous favorable comments that have been made, that it has considerable merit and worthy a place in the library of everyone desiring to keep in touch with all that is of interest in the great mining industry. When you consider all the valuable periodical magazines published in America, Europe, Africa and Australia on mining, mining engineering, metallurgy, mining geology, minero-chemistry, etc., the individual mineral-trade publications, such as those on coal, coking and gas producers, oils, cement, copper, iron and other metals, gems, mineral fertilizers or salines, etc., the even more valuable publications of the world's mineral-industries institutes, societies and affiliated engineering and technical societies, also the federal and state geological surveys and mining bureaus at home and abroad—not to mention new books—it becomes evident that the amount of pertinent and valuable literature available for one's use is really stupendous.

In THE MINING WORLD INDEX OF CURRENT LITERATURE this tremendous mass is thoroughly digested and classified. It is indexed by a remarkably simple and ever-ready plan which you can understand at sight. You need no explanatory key or any previous bibliographic training. Instantly by the system of cross indexing, you can put your finger on anything you may be looking for on mineral or affiliated subjects. Only a moment's time and you can find out what is being done the world over. You need no knowledge of foreign languages. THE INDEX tells you in English (as well as the original language) what all the various articles are about; such foreign articles as you find desirable you can easily have translated, or The Mining World Co. will have the same translated for you at a nominal consideration. Another valuable feature of THE INDEX is in indicating where articles have been republished in whole or in abstract in other journals—indicating, in short, practically all the different technical journals in which an article has appeared. This feature will be appreciated by those whose library facilities are rather limited, and this applies at nearly all mines and mining centers.



Contents

METALS AND METAL ORES.		Iron and Steel (Continued)—	
		General and Miscellaneous: Products, Constitution, Metallography, Corro- sion, Reviews	
CHAPTER I.		CHAPTER V.	
Gold—			
Gold Fields and Mining	1	Alloys (Non-Ferrous)	31
Milling, Metallurgy, Assaying, Etc... .	4	Antimony	32
Geology	6	Chromium	32
Miscellaneous	7	Manganese	32
Silver—		Molybdenum	33
Mines, Mining, Geology	8	Titanium	33
Metallurgy, Chemistry, Cyaniding, Etc.	10	Tungsten	33
Miscellaneous	11	Uranium	33
Platinum ,	12	Vanadium	34
CHAPTER II.		CHAPTER VI.	
Copper—		Tin	35
Mines and Mining	12	Nickel	35
Milling, Smelting, Refining, Etc.....	15	Cobalt	36
Geology	16	Aluminum	37
Miscellaneous	17		
CHAPTER III.		CHAPTER VII.	
Lead—		Cadmium	38
Mines, Mining, Geology	18	Mercury	38
Ore Dressing, Metallurgy, Chemistry, Etc.	19	Osmium and Palladium	38
Miscellaneous	20	Radium and Radio-Actives	38
Zinc—		Miscellaneous (Unclassified)	39
Mines, Mining, Geology	21		
Ore Dressing, Metallurgy, Chemistry, Etc.	22		
Miscellaneous	23		
CHAPTER IV.		NON-METALS.	
Iron and Steel—			
Ores and Mining (Special and Gen- eral)	24		
Beneficiation of Ores (and Flue Dust)	26		
Blast Furnaces and Accessories (Electric Furnaces for Pig Iron)... .	26		
Steel Furnaces and Ingots	27		
Mechanical and Heat Treatment (Physical Testing)	28		
Foundry Practice	29		
CHAPTER V.		CHAPTER VIII.	
Coal—			
Coal Fields and Mining	40		
Preparation, Marketing, Storage, Testing, Etc.	47		
Briquetting	50		
Economics of Coal Mining	50		
Mechanical Cutters	51		
Coal Dust and Gases	51		
Miscellaneous	52		
Coke and Coking	53		
Peat	54		
By-Products	54		

CONTENTS

CHAPTER IX.	
Petroleum—	
Oil Fields, Geology, Mining, Etc.....	56
Uses and Products	58
General and Miscellaneous	59
Natural Gas	60
CHAPTER X.	
Stone; Sand; Gravel	61
Lime	61
Cement	61
Concrete	62
Brick and Tile	62
Ceramics	62
CHAPTER XI.	
Abrasives	64
Acids (Mineral)	64
Arsenic	64
Asbestos	64
Asphalts	64
Barytes	65
Bauxite	65
Bismuth	65
Bitumens	65
Diamonds	65
Fertilizers	65
Feldspar	66
Fluorspar	66
Gems	66
Graphite	67
Gypsum	67
Mica	67
Nitrate and Nitrogen	67
Paints and Pigments	67
Phosphate	67
Potash	67
Pyrte and Sulphur	68
Quartz; Feldspar; Silicates	68
Salines	68
Sapphires	69
Talc and Soapstone	69
MINES AND MINING.	
CHAPTER XII.	
Prospects and Prospecting	70
Surveying and Drafting	70
Drilling and Boring	71
Explosives and Blasting	72
Sinking and Driving—	
Shafts and Shaft Sinking	74
CHAPTER XIII.	
Sinking and Driving (Continued)—	
Tunnels and Tunneling	75
Stoping, Chamber Work, Etc.....	75
Mine and Mill Waters; Pumps	75
Mine Gases; Ventilation	77
Supports—	
Pillars	78
Timbers	78
Stowing	79
Lighting and Signalling—	
Lighting	79
Signalling	80
Mine Telephones	80
CHAPTER XIV.	
Hoists and Hoisting	81
Accidents	82
Sanitation; Safety; Rescue	85
Labor; Management; Sociological	88
Accounts; Bookkeeping	89
Hydraulic Mining; Power Shovels—	
Dredging	90
Sluicing; Hydraulicking	90
Power Shovels; Excavators	91
Mine Miscellany	91
Mineral Production	94
MILLS AND MILLING.	
CHAPTER XV.	
Sampling	98
Reduction: Crushing, Grinding, Etc...	98
Concentration: Sorting, Sizing, Washing	100
Amalgamation	103
Cyaniding	104
Mill: Miscellaneous and General	106
CHEMISTRY AND ASSAYING.	
CHAPTER XVI.	
Chemistry	109
Assaying	118
METALLURGY.	
CHAPTER XVII.	
Electrometallurgy; Electrochemistry	115
Thermic Metallurgy	117
Fuels and Combustion	121
Charging, Discharging, Slags	121
Fume, Gas and Flue Dust	122
Refractories, Walls and Linings	122

CONTENTS

vii

Pyrometry	122
Testing of Metals	122
Metallurgy: General and Miscellaneous.	124

POWER AND MACHINERY.

CHAPTER XVII.

Electricity	128
Electric Blasting	134
Hydro-Electric	138
Compressed Air	134
Combustion Engines	135
Steam and Steam Engines	136
Gas Producers; Producer Gas	138
Power and Machinery Miscellany.....	138

MISCELLANEOUS.

CHAPTER XVIII.

Fuels	140
Slags, Tailings, Fines, Fumes, Sludge, Waters, Etc.	141
Transportation; Storage; Handling.....	142
Ore Genesis	146
Mining Geology	147
Law; Legislation; Taxation	153
Conservation and Government Owner- ship	154
Financial; Business Organization	155
Educational; Schools and Societies....	155
Historical	156
General Miscellany	157



Publications Indexed

INCLUDING PERIODICALS, BOOKS AND TRANSACTIONS, BULLETINS, ETC., OF
SCHOOLS, SOCIETIES AND GOVERNMENT BUREAUS.

A

Acetylene Journal, Chicago.
Allgemeine österreichische Chemiker und Techniker-Zeitung.
American Ceramic Society.
American Chemical Society.
American Electrochemical Society.
American Fertilizer, Philadelphia.
American Institute of Chemical Engineers.
American Institute of Electrical Engineers.
American Institute of Mining Engineers.
American Iron & Steel Institute.
American Journal of Science, New Haven, Conn.
American Metal Society.
American Metallurgical Society.
American Mining Congress.
American Museum of Safety, New York.
American Peat Society.
American Railway Engineering Association.
American Society of Engineering Contractors.
American Society of Mechanical Engineers.
American Wood Preservers' Association.
Anales de la Sociedad Cientifica Argentina.
Annales de Mines, Paris.
Annales des Mines de Belgique, Brussels, Belgium.
American Portland Cement Manufacturers Association of Mining Electrical Engineers, England.
Association of Railway Electrical Engineers.
Australasian Coal & Iron Trade Review, Sydney.
Australasian Institute of Mining Engineers.
Australian Mining Standard, Melbourne.

B

Berg und Hüttenmännische Rundschau, Kattowitz, Germany.
Berg & Hüttenm., Jahrb. Leoben-Pribram.
Bergwirtschaftliche, Mitteilungen.
Birmingham Metallurgical Society, England.
Bitumen, Wiesbaden, Germany.
Black Diamond, Chicago.
Braunkohle.
Brick & Clay Record, Chicago.
British Columbia Bureau of Mines.
British Columbia Mining Exchange & Engineering News, Vancouver, B. C.
British Columbia Mining & Engineering Record, Victoria, B. C.
British Guiana Institute of Mines and Forests.
Bulletin of the Imperial Institute, London.
Bulletin of the Pan-American Union, Washington, D. C.

C

California Miners' Association.
California State Mining Bureau.
Canada Department of Mines, Ottawa.
Canada Geological Survey.
Canadian Engineer, Toronto.
Canadian Mining Institute.
Canadian Mining Journal, Toronto.
Cassier's Magazine, New York.
Cement, New York.
Cement Age, New York.

Centralblatt der Hütten & Walzwerke, Berlin, Germany.
Chemical Engineer, Chicago.
Chemical, Metallurgical & Mining Society of South Africa, Johannesburg.
Chemiker-Zeitung, Cöthen, Germany.
Chemiker & Techniker-Zeitung, Vienna, Austria.
Chemist-Analyst.
Cleveland Engineering Society, Cleveland, Ohio.
Coal Age, New York.
Coal Mining Institute of America.
Coal Trade Bulletin, Pittsburgh.
Coal & Coke Operator, Pittsburgh.
Colliery Engineer, Scranton, Pa.
Colliery Guardian, London.
Colorado Scientific Society.
Colorado State Bureau of Mines.
Columbia School of Mines Quarterly, New York.
Compressed Air Magazine, New York.
Connecticut State Geological & Natural History Survey.
Cornwall Mining Association and Institute, Cornwall, England.
Cuerpo de Ingenieros de Minas del Peru, Lima, Peru.

D

Der Bergbau, Gelsenkirchen, Germany.
Der Erzbergbau, Berlin, Germany.
Der Kohleninteressent, Teplitz, Bohemia.
Deutsche Bergwerks Zeitung, Essen-Ruhr, Germany.
Deutsche Technik, Germany.
Die Fördertechnik, Wittenberg, Germany.
Domestic Engineering, Chicago.

E

Economic Geology, Urbana, Ill.
Edinburgh Geological Society, Edinburgh, Scotland.
Eisen Zeitung, Berlin, Germany.
El Economista Mexicana, Mexico City.
Electrical Engineer, London.
Electrical Review, London.
Electrical Review & Western Electrician, Chicago.
Electrician, London.
Electrotechnik & Maschinenbau, Vienna, Austria.
Elektrochemische Zeitschrift, Berlin, Germany.
El Paso Mining Journal, El Paso, Tex.
Engineering Association of New South Wales, Sydney, Australia.
Engineering Digest, New York.
Engineering, London.
Engineering Magazine, New York.
Engineering News, New York.
Engineering Record, New York.
Engineering Review, London.
Engineering & Contracting, Chicago.
Engineering & Mining Journal, New York.
Engineers' Club, Philadelphia.
Engineers' Society of Eastern Pennsylvania.
Engineers' Society of Western Pennsylvania.
English Ceramic Society, England.
Excavating Engineer, Milwaukee, Wis.
Faraday Society, London.

F

Federated Malay States Mines Report, Singapore.
Ferrum, Aachen, Germany.
Florida State Geological Survey, Tallahassee.
Franklin Institute, Philadelphia, Pa.

G

General Electric Review, Schenectady, N. Y.
Geological Society of South Africa.
Geological Society of Tokyo, Japan.
Geological Society of Washington, Washington, D. C.
Georgia Geological Survey, Atlanta.
Giesserei Zeitung, Berlin, Germany.
Glückauf, Essen, Germany.
Great Britain Geological Survey.

I

Idaho State Inspector of Mines.
Ideal Power, Chicago.
Illinois State Geological Survey, Urbana.
III.

Illuminating Engineering Society.
India Geological Survey, Calcutta.
Indian & Eastern Engineer, Calcutta.
Indiana Department of Geology & Natural Resources, Indianapolis.
Industrial Advocate, Halifax, Nova Scotia.
Industrial Engineering, New York.
Informaciones y Memorias, Boletin de la Sociedad de Ingenieros, Lima, Peru.
Informes y Memorias del Instituto Mexicano, de Mines of Metallurgy, Mexico.
Ingencia, Spain.
Institute of Engineers & Ship Builders, Scotland.
Institute of Marine Engineers, England.
Institution of Mining Engineers, London.
Institution of Mining & Metallurgy, London.
International Association for Testing Materials.
International Congress for Radiology & Electrology.
International Railway Fuel Association.
Iowa Engineer, Ames, Iowa.
Iowa Geological Survey.
Iowa State College Engineering Experiment Station, Ames.
Iron Age, New York.
Iron Trade Review, Cleveland, O.
Iron & Coal Trades Review, London.
Iron & Steel Institute, London.

J

Journal du Four Electrique et de l'Electrolyse, Paris.
Journal du Petrole, Paris.
Journal of Electricity, Power & Gas, San Francisco.
Journal of Geology, Chicago.
Journal of Industrial & Engineering Chemistry, Easton, Pa.

K

Kali, Erz & Kohle, Halle, Germany.
Kali, Halle, Germany.
Kansas University Geological Survey.
Kentucky Geological Survey.
Kentucky Mining Institute.
Kohle & Erz, Kattowitz, Germany.

L

La Metallurgia Italiana, Milan, Italy.
La Metallurgie du Nord, Maubeuge, France.
Lackawanna Chemical Society, Scranton, Pa.
Lake Superior Mining Institute, Ishpeming, Mich.
L'Echo des Mines de la Métallurgie, Paris, France.

Le Pétrole, Paris, France.

Le Phosphate, Paris.

Levant Trade Review.

Liverpool Geological Association, Liverpool, England.

Los Angeles Chamber of Mines & Oil, Los Angeles, Cal.

Louisiana Geological Survey, Baton Rouge.

L'Opinion Financiere, Paris, France.

M

Malayan Tin & Rubber Journal, Ipoh-Perak, F. M. S.
Manchester Association of Engineers, Manchester, England.
Manchester Mining & Geological Society, England.
Mechanical World, Manchester, England.
Metall und Erz, Halle, Germany.
Metallurgia Italiana, Italy.
Metallurgical & Chemical Engineering, New York.
Metallurgie, Halle, Germany.
Mexican Institute of Mining & Metallurgy, Mexico.
Mexican Mining Journal, Mexico City.
Michigan Geological Survey, Lansing, Mich.
Midland Institute of Mining, Civil & Mechanical Engineers, England.
Mines & Methods, Salt Lake.
Mines & Minerals, Scranton, Pa.
Mining Engineering, London.
Mining Institute of Scotland, Hamilton.
Mining Journal, London.
Mining Magazine, London.
Mining Science, Denver, Colo.
Mining Society of Nova Scotia, Halifax, Canada.
Mining World & Engineering Record, London.
Mining & Engineering Review, Melbourne, Australia.
Mining & Engineering World, Chicago.
Mining & Geological Institute of India, Calcutta.
Mining & Metallurgical Society of America.
Mining & Scientific Press, San Francisco.
Minnesota Geological & Natural History Survey.
Mississippi State Geological Survey.
Missouri Bureau of Geology & Mines, Rolla.
Missouri Geological Survey.
Missouri School of Mines.
Montan-Zeitung für Oesterreich-Ungarn und die Balkanländer, Graz, Austria.
Montana Inspector of Mines' Reports, Helena.
Montanistische Rundschau, Berlin, Germany.

N

National Academy of Sciences.
National Association of Colliery Managers, London.
National Association of Stationary Engineers.
National Geographic Magazine, Washington, D. C.
National Lime Manufacturers' Association, Riverton, Va.
Natural Gas Journal, Buffalo, N. Y.
New Jersey Geological Survey, Trenton.
New South Wales Engineering Association, Sydney.
New York & Eastern Pennsylvania Coal Merchants' Association.
New Zealand Geological Survey, Wellington.
New Zealand Institute, Wellington.
North Carolina Geological Survey, Chapel Hill.
North of England Institute of Mining & Mechanical Engineers, Newcastle-on-Tyne, England.
North Staffordshire Institute of Mining & Mechanical Engineers, Stoke-on-Trent, England.
Northwest Mining & Metallurgy, Spokane, Wash.
Nova Scotia Mining Society.

O

Oil Age, Los Angeles, Cal.
Oklahoma Geological Survey, Norman.
Ontario Bureau of Mines, Toronto.
Oxford Ophthalmological Congress, England.

P

Pacific Mining Journal, Seattle, Wash.
Pahasapa Quarterly, Rapid City, S. D.
Pan American Union, Washington, D. C.
Pennsylvania Mines Department, Harrisburg.
Pennsylvania Topographic & Geologic Survey, Harrisburg.
Peru Today, Lima.
Petroleum, Berlin, Germany.
Petroleum World, London.
Pfals-Saarbrücker Bezirkvereins deutscher Ingenieure, Germany.
Philadelphia Engineers' Club, Philadelphia.
Philippine Journal of Science, Manila.
Power, New York.
Practical Electricity & Engineering, Chicago.
Practical Engineer, Chicago.

Q

Quebec Bureau of Mines, Quebec.
Quebec Department of Colonization, Mines & Fisheries, Quebec.
Queensland Geological Survey, Brisbane.
Queensland Government Mining Journal, Brisbane.

R

Radium, Pittsburgh.
Rassegna Mineraria Metallurgica e Chimica, Turin, Italy.
Resources of Tennessee, Nashville.
Revue de Metallurgie, France.
Revue des Matériaux de Construction et de Travaux Publics, Paris.
Rhodesia (Southern) Mines Department, Salisbury.
Rhodesian Chamber of Mines, Bulawayo.
Rock Products, Chicago.
Resoconti delle Riunioni Asso. Sarda, Italy.
Revista Minera Metallurgica y de Ingeniería, Madrid, Spain.
Revista Minera e Industria de Linares, Spain.
Revue d'Electrochimie et d'Electrometallurgy, Paris, France.
Revue Noire, Paris, France.
Revue Practique des Industries Metallurgiques, Paris, France.
Riga sche Industrie Zeitung, Riga, Russia.
Royal Geological Society of Cornwall, England.
Royal Society of Arts Journal, London.

S

Salt Lake Mining Review, Utah.
Science & Art of Mining, Wigan, England.
Sibley Journal of Engineering, Ithaca, N. Y.
Smithsonian Institution, Washington, D. C.
Société Amicale des Anciens Élèves de l'école des Maitres-Mineurs de Douai, France.
Société Chimique de Belgique, Brussels, Belgium.
Société des Ingénieurs Civils de France.
Society of Arts, London.
Society of the Chemical Industry, London.
Society of the Chemical Industry, New York.
South Africa Engineering, London.
South African Association of Engineers, Johannesburg.
South African Institute of Electrical Engineers.
South African Mining Journal, Johannesburg.
South Dakota Engineering Society.
South Dakota Inspector of Mines, Sioux City, S. Dak.

South Dakota School of Mines, Rapid City, S. Dak.
South Staffordshire & Warwickshire Institute of Mining Engineers, Birmingham, England.
South Wales Institute of Engineers, Cardiff, Wales.
Staffordshire Iron & Steel Institute, England.
Stahl & Eisen, Düsseldorf, Germany.
Südwestdeutsche Industrie Zeitung, Saarbrücken, Prussia.

T

Technische Blätter, Essen-Ruhr, Germany.
Technische Centralanzeiger, Germany.
Tech. du Nord de la France.
Tennessee State Geological Survey, Nashville.
Tonindustrie Zeitung, Berlin, Germany.
Transvaal Chamber of Mines, Johannesburg.

U

United States Bureau of Mines, Washington, D. C.
United States Bureau of Standards, Washington, D. C.
United States Bureau of Standards.
United States Consular Reports, Washington, D. C.
United States Department of Agriculture, Washington, D. C.
United States Department of Commerce and Labor, Washington, D. C.
United States Geological Survey, Washington, D. C.
University of Illinois, Engineering Experiment Station, Urbana.
University of Texas, Austin.
University of Texas Mineral Survey.

V

Vancouver, B. C., Chamber of Mines, Vancouver, B. C.
Victoria Chamber of Mines, Melbourne, Australia.
Virginia Geological Survey, Charlottesville.

W

West Australian Mining, Building & Engineering Journal, Kalgoorlie.
West of Scotland Iron & Steel Institute, Glasgow.
West Virginia Geological Survey, Morgantown.
Western Australia Department of Mines, Perth.
Western Australia Geological Survey, Perth.
Western Australia Institution of Engineers, Perth.
Western Society of Engineers, Chicago.
Wisconsin Engineer, Madison.
Wisconsin Geological & Natural History Survey, Madison.
Wood Preservers' Association, Chicago.
Wyoming Geological Survey, Cheyenne.

Z

Zeitschrift der Oberschlesischen Berg & Hüttenmannischen Verein, Kattowitz, Germany.
Zeitschrift des Internationalen Vereines der Bohringenieure & Bohrtechniker, Vienna, Austria.
Zeitschrift des Zentral Verbandes der Bergbau Betriebsleiter, Dux, Bohemia.
Zeitschrift für des Berg, Hütten & Salinen Wesen in preussischen Staate, Berlin, Germany.
Zeitschrift für das gesamte Schloss & Sprengstoffwesen, Munich, Germany.
Zeitschrift für Elektrochemie, Halle, Germany.
Zeitschrift für praktische Geologie, Berlin.
Zentral - Blatt Kunstdünger Industrie, Mannheim, Germany.

Explanations and Abbreviations

The entries show:

- (1) The author of the article.
- (2) A dash if the name is not apparent.
- (3) The title, in italics, of the article or book. Titles in foreign languages are ordinarily followed by a translation or explanation in English.
- (4) When the original title is insufficient a brief amplification is added. This addition is in brackets.
- (5) The journal in which the article ap-

peared; also the date of issue, and the page on which the article begins.

(6) Approximate number of words. Illustrated articles are indicated by an asterisk (*).

(7) The price. Articles mentioned will be supplied to subscribers of Mining and Engineering World and others at the prices quoted. Subscribers, however, will be allowed a discount of 5 cts. if the price of the article exceeds 50 cts.

Subjoined is a list of the commoner abbreviations found in this work. They are used chiefly in the names of periodicals, and of associations. The abbreviations will be found easily intelligible at sight, and are what they purport to be—self-explanatory abbreviations, not symbols.

Acad.—Academy; Académie; Accademia.	Hüttenm.—Hüttenmännlichkeit.
Afr.—Africa; African.	Ind'l.—Industrial; Industriel; Industrielle.
Akad.—Akademie.	Ingr.—Ingenieurs; Ingenieros.
Allgm.—Allgemeine.	Inst.—Institute; Institut; Institute.
Amer.—American.	Instn.—Institution.
Archts.—Architects.	Jahresber.—Jahresbericht.
Asso.—Association; Associazione.	Jahrb.—Jahrbuch.
Ber.—Berichte.	Jnl.—Journal.
Bol.—Boletin; Boletim; Bollettino.	Mag.—Magazine.
Bull.—Bulletin.	Mechl.—Mechanical.
Bur.—Bureau.	Met'g'l.—Metallurgical.
Centralbl.—Centralblatt.	Met'gy.—Metallurgy.
C-R.—Compte-Rendu; Resoconti.	Mex.—Mexican.
Chem'l.—Chemical.	Mittling.—Mitteilungen.
Chem'y.—Chemistry.	Mnf'res.—Manufacturers.
Coll'y.—Colliery.	Mng.—Mining.
Congr.—Congress.	Oestr.—Oesterreichische; Oesterreich.
d.—des (French and German).	Proc.—Proceedings.
Dept.—Department.	Quar'ly.—Quarterly.
Deu.—Deutsche, etc.	Rev.—Review; Revue; Revista.
Electr.—Electrical.	Sci.—Science; Sciences.
Engg.—Engineering.	Scient.—Scientific.
Engr.—Engineer.	Soc.—Society; Société; Società.
Engrs.—Engineers.	Suppl.—Supplement; Supplementary.
f.—for; für.	Trans.—Transactions.
Gast.—Gazette.	Vер.—Verein.
Geol.—Geological.	Verb.—Verband.
Geo'l'y.—Geology.	Verh.—Verhandlungen.
Ges.—Gesellschaft.	Zentralbl.—Zentralblatt.
Gov't.—Government.	Ztg.—Zeitung.
	Zts.—Zeitschrift.

PART I.

ORES AND MINERAL PRODUCTS.

METALS AND METAL ORES.

CHAPTER I.

GOLD, SILVER AND PLATINUM.

GOLD

Gold Fields and Mining

Adams, Geo. I. and Pratt, W. E.—*Mineral Resources of Luzon, Philippine Islands*. (Abstract from Phil. Jnl. Com., Dec. 1912).—Mg. & Eng. World, Jan. 4, 1913; p. 14; 1250 w; 10c.

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Brady, Austin C.—*Mining in Mexico in 1912*.—Mg. & Eng. World, Jan. 25, 1913; p. 233; 10,000 w; 25c.

Brewer, W. M.—*Winter Work on the Kenai Peninsula*.—M. & S. P., May 17, 1913; 1800 w; 20c.

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Denis, Theo C.—*Mineral Production of Quebec in 1912*. (Paper read before Ottawa meeting Canadian Mg. Inst.).—Can. Mg. Jnl., March 15, 1913; p. 176; 1500 w; 35c.

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Dinwiddie, G. I.—*Notes on the Urique District, Mexico*.—Mex. Mg. Jnl., April, 1913; p. 192; 2200 w; 25c.

Eddy, L. H.—*An Attempt to Restrict Gold Dredging in California*.—E. & M. J., March 22, 1913; p. 626; 750 w; 25c.

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Hafer, Claud.—*A North Carolina Mining Enterprise*.—M. & S. P., May 17, 1913; p. 728; 2800 w*; 20c.

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Hibbert, E.—*Methods and Costs at the Mother Lode Mine*, B. C.—E. & M. J., March 22, 1913; p. 599; 3000 w*; 25c.

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Janin, Charles.—*Proposed Regulation of Gold Dredging*, M. & S. P., March 8, 1913; p. 381; 4000 w*; 25c.

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Palmer, Leroy A.—*Mining and Milling at the Wasp No. 2, South Dakota*.—Mg. Sci., Feb. 18, 1913; p. 103; 2000 w; 20c.

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3

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MINING WORLD INDEX OF CURRENT LITERATURE.

5

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7

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CHAPTER III.

LEAD AND ZINC.

LEAD

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CHAPTER IV.

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CHAPTER V.

ALLOYS, ANTIMONY, CHROMIUM, MANGANESE, MOLYBDENUM, TITANIUM, TUNGSTEN, URANIUM, VANADIUM.

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CHAPTER VI.

TIN, NICKEL, COBALT, ALUMINUM.

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CHAPTER VII.

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NON-METALS.

CHAPTER VIII.

FUELS AND BY-PRODUCTS.

COAL

Coal Fields and Mining

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CHAPTER IX.

PETROLEUM AND NATURAL GAS.

PETROLEUM AND OILS

Oil Fields, Geology, Mining, etc.

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67

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CHAPTER XII.

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MINES AND MINING (b*).

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MILL AND MILLING.

CHAPTER XIV

SAMPLING

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100 MINING WORLD INDEX OF CURRENT LITERATURE.

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MINING WORLD INDEX OF CURRENT LITERATURE. 101

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106 MINING WORLD INDEX OF CURRENT LITERATURE.

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108 MINING WORLD INDEX OF CURRENT LITERATURE.

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CHEMISTRY AND ASSAYING.

CHAPTER XV.

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110 MINING WORLD INDEX OF CURRENT LITERATURE.

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114 MINING WORLD INDEX OF CURRENT LITERATURE.

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METALLURGY.

CHAPTER XVI.

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- _____. *Tratamiento por Vía Humeda de los Minerales de Cobre*; [Treatment of copper ores in a wet way (new methods)].—Revista Minera, Jan. 1, 1913; p. 2; 1000 w; 35c.
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POWER AND MACHINERY.*

CHAPTER XVII.

ELECTRICITY

For electricity in Mine, Mill, etc., see also Electrometallurgy.

Abell, Oliver J.—New Steel Foundries Using Electric Furnaces.—Iron Age, May 29, 1913; p 1288; 1800 w*; 30c.

Ackerman, Eugene.—Operating a Tungsten Mine in the North of Portugal.—Mg. & Eng. World, April 5, 1913; p 677; 750 w; 10c.

Aikens, Warren.—Electric Power in Wisconsin-Illinois Zinc-Lead Field.—Mg. & Eng. World, March 16, 1913; p 521; 3000 w*; March 22, 1913; p 571; 2000 w*; 20c.

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NOTE.—For drills, pumps, fans, haulage and winding engines, dredges, excavators, crushers, separators, conveyors, transportation machinery, etc., see respectively "Drilling and Boring," "Drainage," "Ventilation" and other appropriate headings in "Mine and Mining," "Mill and Milling," and "Miscellaneous."

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Bowen, D.—Experiments on Safety Devices in Connection with Electrical Machinery for Coal Mines. (Abstract of lecture before a joint meeting of the Yorkshire Branches of the Natnl. Asso. of Colliery Mgrs. and the Asso. of Mg. Elect. Engrs.)—Iron & Coal Trades Rev., Feb. 14, 1913; 5300 w; 35c.

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130 MINING WORLD INDEX OF CURRENT LITERATURE.

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132 MINING WORLD INDEX OF CURRENT LITERATURE.

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PART III.

MISCELLANEOUS.*

CHAPTER XVIII.

FUELS

See also under Coals, Peat, Petroleum, Producer Gas.

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152 MINING WORLD INDEX OF CURRENT LITERATURE.

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156 MINING WORLD INDEX OF CURRENT LITERATURE.

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158 MINING WORLD INDEX OF CURRENT LITERATURE.

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Authors' Index

A

Abbott, Robert R. 29, 124
 Abell, Oliver J. 29, 117, 128
 Abraham, Herbert 65
 Abramowitz, M. W. 56, 122
 Ackerman, Eugene. 33, 100, 128, 142
 Adams, Geo. I. 1, 8, 12, 18, 40, 94
 Adams, Mason T. 88, 89, 91, 100
 Adams, Thomas K. 50, 88
 Ahlbrandt, G. F. 29
 Aigner, August 68, 94, 154, 156
 Aikens, Warren 18, 21, 56, 75, 128, 133, 134, 136
 Akin, A. D. 75
 Alderson, Matt W. 12, 70, 91, 156
 Alexander, D. C., Jr. 1, 33, 35, 75, 88, 90, 98, 117, 133, 137
 Allard, A. F. 40, 62, 85, 91
 Allen, Carl A. 1, 91
 Allen, F. A. 10, 109
 Aller, Frank D. 4, 10, 15, 19, 47, 53, 75, 109
 Allison, R. 88
 Allison, S. A. 21, 128
 Alzugaray, Baxteres de. 113, 117, 124, 128
 Amedeo 82, 115
 Anderson, A. O. 75, 157
 Anderson, G. W. T. 47, 128
 Anthony, R. B. 134
 Anderson, Wm. T. 47, 74, 81
 Anrep, A. 54
 Anson, J. W. 128
 Anthony, R. B. 82
 Archbald, Hugh. 40, 47, 72, 142
 Argall, Phillip 100, 104
 Armstrong, H. E. 113
 Arnold, Ralph 56, 59, 60, 61, 141
 Aron, A. 40, 82
 Artmann, P. 64, 113
 Ashley, Geo. H. 56, 147
 Ashton, Ralph Percy 40, 94
 Ashworth, James 51, 82, 85
 Auchy, George 27, 117
 Aufhauser, Dr. 40, 53, 54, 58, 140
 Austin, L. S. 4, 19, 100, 106, 117, 125, 141
 Ayres, W. S. 47, 100

B

Bailey, Frank 11, 70, 90
 Balliet, Letson. 74, 77, 79, 82, 88, 134
 Ball, Lionel C. 33, 35, 56, 67, 100, 147
 Ball, Sydney H. 1, 12, 24, 36, 40, 94, 140, 142, 157
 Banacough, S. H. 136
 Bancroft, Geo. J. 133
 Bancroft, Howland. 1, 8, 12, 24, 34, 35, 68
 Bancroft, Wilder D. 15, 115
 Bancroft, J. Auten 147
 Banigan, J. J. 16, 147
 Barnhurst, H. R. 47, 140
 Barham, G. Basil. 115, 117, 128
 Barnitzke, Joh. E. 66, 91, 147
 Barr, George 134, 136
 Bartel, Bonring E. 56
 Barth, Carl G., Jr. 106, 125, 157
 Bartholomew, G. P. 40, 128
 Barton, S. F. 128
 Baskerville, Chas. 33, 56, 109

Bastin, Edson S. 6, 8, 11, 67, 105, 107, 111, 146, 147, 151
 Bateman, C. G. 70, 71, 91, 98
 Battiscombe, C. A. 128, 138
 Bauer, Th. 109
 Baumann, D. F. 81, 85, 91
 Beard, H. 75, 157
 Beard, J. T. 40, 72, 77
 Beaupain, M. 78, 91
 Beck, E. A. 27, 117
 Beck, Richard. 6, 35, 40, 106, 146, 147, 157
 Becker, Geo. F. 94
 Beecher, M. F. 62, 122
 Beers, C. W. 40, 47, 128, 138
 Beeston, A. 40, 136
 Bell, C. 68, 147
 Belck, W. 28, 117, 125
 Belden, A. W. 53, 54
 Beling 122
 Bell, John W. 4, 98, 100, 104
 Bell, Robert N. 18, 94
 Bement, A. 40, 47, 94, 128, 147
 Benner, Raymond C. 15, 22, 29, 59, 109, 125, 141, 154
 Bennett, C. W. 15, 109, 115, 117, 128
 Bennett, James C. 98, 128
 Bentley, O. D. H. 75, 136
 Berger, L. 24, 39, 40
 Berggren, A. E. 136
 Berkenkamp 85, 91
 Berndt, G. 38, 122
 Bernewitz, M. W. von. 4, 10, 58, 78, 91, 98, 100, 104,
 117, 125, 128, 133, 134, 136, 138, 141, 142
 Berry, S. L. 98, 106
 Bertling, Henry E. 82, 85
 Bertling, J. F. 71, 91
 Bertelsmann, Dr. 58, 138, 140
 Beutner, Reinhard 115
 Beveridge, David 40, 78
 Beyling 51, 72, 82, 85
 Eeyne, Edgar 23, 117
 Biesecker, A. S. 45, 132
 Bird, Frank A. 22, 100, 117
 Blacher, C. 109
 Black, James 81, 85, 91
 Blackett, W. C. 40, 51, 77, 83
 Blackwood, A. S. F. 26, 27
 Blair, A. F. 47, 100
 Blakey, J. H. 75, 135, 136
 Blanqueier, Juan. 12, 13, 88, 132, 153
 Blau, Ernst 91, 117, 125, 134
 Blauvelt, William Hutton 53, 54
 Blood, Geo. D. 8, 18, 100, 125, 147
 Blum, Theodor 72, 91
 Blyth, W. B. 5, 106
 Bock, Fr. 40, 146
 Boericke, W. F. 21, 81
 Bogart, F. R. 47, 142
 Boileau, John W. 40, 94
 Bond, F. M. 78
 Bond, Josiah 146
 Bonney, Wilbur H. 8, 15, 21, 38
 Booth, W. H. 40, 58, 77, 108, 135
 Bosshard, E. 64, 68, 109
 Botsford, C. W. 12, 70, 146
 Botsford, H. L. 71, 75, 78, 142
 Böttcher, W. 64, 68, 112
 Botting, D. C. 40, 83
 Bouchelle, Theodore. 4, 15, 109, 116, 153
 Bouyer, Pierre 4, 90, 100
 Bowen, D. 40, 51, 77, 85, 128
 Bowen, N. L. 66
 Bowman, Frank 85, 91

AUTHORS' INDEX

- Brackett, F. E. 47, 142
 Bradshaw, Frederick 1, 8, 94
 Bradley, Walter W. 39, 70, 153, 154
 Brady, Austin C. 1, 8, 12, 18, 56
 Branch, Jas. G. 136
 Branner, J. C. 147
 Branson, E. B. 152
 Braun, Otto 70, 77, 91
 Braunsteiner 53, 142
 Breckenridge, L. P. 155
 Brennan, A. L. 135, 138
 Brewer, W. M. 1, 91, 157
 Brewster, L. L. 135, 138
 Breyhan 40, 47, 85
 Briggs, Henry 47, 85, 122
 Briggs, T. R. 15, 115
 Broad-Roberts, J. 37, 64
 Brodigan, Charles B. 71, 72, 74, 78, 81
 Brokaw, Albert D. 7, 146
 Bronckart, F. 33, 147
 Brooks, Alfred H. 1, 4, 12, 35, 40
 Brooks, G. S. 22, 37, 117
 Brooks, Huxley St. John 4, 104, 106, 125
 Broughton, H. H. 128, 142
 Brown, C. O. 15, 115, 117, 128
 Brown, Everard 26, 135, 136, 141
 Brown, Geo. M. 72, 83, 128
 Brown, Gilmour E. 35, 148
 Brown, Rome G. 138
 Brown, Thos. C. 61, 146, 148
 Browne, R. Stuart 155
 Bruckner, Walter 31, 39, 116
 Bryant, F. C. 65
 Buchanan, Gordon 40, 47
 Euck, D. M. 17, 29, 109, 117
 Burchard, Ernest F. 24, 32, 70, 71
 Burgess, Charles W. 21, 88, 106, 148
 Burns, E. Z. 9, 13, 75
 Burrell, Geo. A. 47, 51, 72, 77, 83, 109, 122, 141
 Burroughs, Wilbur G. 40, 148
 Bushell, B. D. 72, 74
 Butler, B. S. 12, 94
 Butler, G. Montague 7, 18, 21, 101, 122, 148, 156
 Butler, J. E. 40, 85, 88
 Butow 50, 140
- C
- Cadell, H. M. 56, 148
 Cadman, John 85
 Caetani, Gelasio 10, 19, 23, 91, 98, 101, 117, 125
 Caldecott, W. A. 99, 106, 157
 Callbreath, James 50, 153, 154
 Campbell, F. H. 32, 101, 109
 Campbell, L. G. 91, 153
 Campbell, Marius B. 40, 56, 58, 147, 148
 Campbell, Wm. 29, 31, 109, 115, 117, 125
 Cameron, R. Clyde 91, 146
 Canby, R. C. 19, 101, 117, 125
 Carey, Elmer Ellsworth 4, 115
 Carleton, A. E. 35
 Carpenter, H. V. 136
 Carpenter, J. A. 75, 104, 106
 Carr, U. U. 40, 77, 85, 128
 Carter, E. E. 106
 Carter, H. F. 4, 10, 99, 103, 104
 Carter, T. Lane 106
 Cartwright, Cosmo T. 1, 8, 12, 18, 21, 36
 Caspari, Fritz 15, 117
 Casparis, K. E. 61, 81, 99
 Cathcart, W. B. 64
 Catheral, A. P. 24
 Cavagnaro, D. A. 81, 143
 Cedarblom, R. 136
 Chamberlin, Rollin T. 148
 Chambers, G. K. 81, 85, 91
 Chambers, D. M. 56, 148
 Chase, Charles A. 89
 Chauvenet, Regis 109, 121, 122
 Chauvenet, Samuel H. 125
- Chesneau, G. 34, 109
 Chilton, J. 92, 148
 Chittenden, J. P. 128, 136
 Cholmeley, N. G. 56, 148
 Christensen, Arthur O. 92, 153
 Christopher, J. E. 47, 53, 54, 109
 Ciselet, Joseph 65, 109
 Clapp, Charles H. 7, 71, 148, 149
 Clark, Allan J. 103, 104, 106, 113, 132, 126
 Clark, Henry 41, 47, 81, 85, 143
 Clark, H. H. 41, 51, 72, 77, 83, 85, 122, 128
 Clark, Wm. W. 34, 68, 109, 113
 Clarke, E. de Courcy 56, 70, 148
 Cleaton, R. Ewart 136
 Clement, J. K. 29, 115
 Clendinen, Joseph 17, 157
 Clevellen, J. E. 5, 10, 109, 122
 Clerc, F. L. 22, 101, 117
 Clevenger, G. H. 5, 10, 104, 106, 113
 Clifford, Jas. O. 12, 16, 70, 101, 129, 146, 148
 Coisy, Stewart C. 28, 129
 Cosgleshall, George W. 109, 117, 148
 Cohn, A. G. 1, 8, 12
 Cohn, L. M. 31, 37, 122
 Colburn, E. A. 1, 70, 98, 99, 106, 125, 146
 Cole, E. L. 47, 88
 Colgate, R. T. 113
 Collins, George E. 7, 8, 98, 146
 Cone, Edwin F. 29, 117, 129
 Conibear, Wm. 24, 85, 88
 Conklin, H. R. 5
 ... 8, 76, 99, 103, 104, 106, 133, 136, 138, 143
 Couly, Frank 1, 148
 Conner, A. B. 68, 113
 Cooke, H. C. 8, 146
 Cooke, L. H. 70, 92, 157
 Coons, A. T. 61, 94
 Cooper, Geo. S. 135
 Cooper-Key, A. 12, 92, 146, 153, 154, 155, 156, 157
 Copenharve, Charles 1, 8, 12, 21
 Corbett, R. H. 12, 81, 134
 Corkhill, E. T. 41, 83, 125
 Cornell, Sidney 27, 121, 122
 Cornet, F. C. 41, 77
 Cory, Edwin N. 24, 71, 74
 Coste, J. H. 48, 110, 123
 Court, J. 85, 88
 Courtois-Sumit, Dr. 72, 85, 157
 Coward, Herbert 136
 Cowles, Alfred C. 37, 62
 Cox, Alvin J. 61, 62
 Cox, Edward H. 41, 48, 101
 Crane, W. R. 41, 148
 Cranston, Robert E. 1, 90
 Crockard, Frank H. 27, 117
 Crocker, Wm. J. 24, 81, 88, 92, 98, 109, 157
 Crooks, Wm. 41, 78, 85
 Crosby, F. B. 41, 77, 129
 Cross, Whitman 146
 Crowell, Benedict 24, 98
 Cunynghame, Henry 77
 Cushman, Allerton S. 67, 109, 117, 148
 Cutler, H. C. 1
 Czaplinski, Karl Julian 51, 83, 85
- D
- Dale, T. Nelson 61, 148
 Dalzell, S. M. 41, 48, 143
 Dammann, G. 68, 153
 Darling, Chas. R. 27, 122, 129
 Darlington, Thos. 20, 85, 88
 Darton, N. H. 41, 61, 79
 Daugherty, R. L. 76, 136
 Dautriché, H. 44, 52, 73, 124
 Davenport, Frank B. 47, 101, 143
 Davenport, L. D. 24, 78, 81
 Davey, Richard 15, 126
 Davidson, Jas. L. 41, 83
 Davis, A. W. 68
 Davis, Charles A. 54, 140
 Davis, Hywel 41, 83, 85

AUTHORS' INDEX

xv

Davis, H. F.	88	Evans, Llewellyn	133
Davis, W. M.	138, 140	Bye, C. M.	148, 157
Dawson, Thos. W.	41, 85, 88		
Day, David T.	56, 148		
Degenhardt, W. R.	5, 99, 104, 106		
Deichman, Carl	1, 12, 41, 81, 129		
Del Mar, Algernon	99, 101, 106		
Delamater, G. R.	47		
Delaney, C. H.	76, 136		
Delbarre, Florian	39, 115		
Dell, G. Donald	129		
Deimer, A.	24, 148		
Demarest, D. J.	15, 19, 22, 32, 64, 65, 109, 115		
Denis, Theo. C.	1, 8, 12, 18, 21, 64, 94		
Denny, G. A.	71, 134		
Des Roches, Geo. E.	24, 76, 81, 85		
Desollar, T. C.	15, 81, 99		
Deustua, R. A.	56		
Dewey, Frederic P.	10, 113, 122, 125		
Dick, D. J.	85		
Dilworth, J. B.	41, 70, 71		
Dinsmore, Chas. A.	56, 68, 68, 71		
Dinwiddie, G. I.	1, 18, 148		
Dix	82		
Dixon, Abner F.	67, 148		
Dixon, Charlton	41, 148		
Dixon, S. M.	62, 78		
Dobblestein	41, 48, 50, 53, 64, 77, 140, 141, 143		
Dolbear, C. E.	56, 71		
Donaldson, R. J.	70, 92		
Doss, Bruno	68, 146		
Douglas, James	12, 92, 99, 133, 148, 148, 156		
Downey, Chas. J.	155		
Drexel, F.	129		
Duchez, J.	61, 117		
Duciaux, M. L. Venton	54, 135		
Dudley, P. H.	27, 117, 122		
Duisberg, Carl	109		
Dumble, E. T.	7, 148		
Duncan, Lindsay	83, 134		
Dunlop, John	43, 86		
Dunlop, J. P.	18, 21, 94		
Dunn, J. T.	53, 140		
Durant, H. T.	12, 22, 125		
Fyson, C. W.	58, 140		
E			
Eades, Charles B.	62, 74		
Easton, H. D.	41, 48, 143		
Easton, W. H.	41, 76, 81, 129		
Ebaugh, W. C.	66, 67, 148		
Eccleston, C. W.	101		
Eckel, Edwin C.	24, 148		
Eckhardt, A.	92, 148		
Eckler	29, 117, 125, 134		
Eckmann, S. H.	28, 129, 136		
Eddy, H. C.	41		
Eddy, Lewis H.	1, 7, 12, 71, 81, 90, 92, 99, 129, 133		
Edwards, Charles A.	26, 117		
Edwards, Geo. E.			
12, 26, 76, 81, 85, 129, 133, 134, 136, 143			
Edwards, Vance P.	15, 109, 125		
Ehle, Mark	81, 136		
Ellender, W.	27, 29, 129		
Ellers, A.	19, 122, 125, 141, 154		
Elliott, S. R.	12, 24, 62, 71, 72, 74, 81		
Elsing, Morris J.	16, 146		
Elwitz	85, 92		
Elwood, W. F.	47, 50, 109		
Emley, W. E.	61, 117		
Emmens, Newton W.	8, 12, 18, 21, 24, 33, 148		
Empson, J. B.	5, 10, 101, 104		
Emrich, Clarence T.	15, 88, 98, 101, 117		
Engler, C.	59, 64, 109, 146		
Ericson, Eric John	22, 110		
Ernhart, W. C.	41, 48		
Esch, Peter	24, 148		
Eurich, Ernest F.	10, 20, 22, 117, 125		
Eustis, W. J.	41, 143		
Evans, Geo. W.	41		
		F	
Falding, F. J.	64		
Fanning, Paul R.	1, 7, 8, 16, 148		
Faston, W. H.	41		
Fauck, A.	56, 71, 83		
Fechheimer, C. J.	129		
Fernald, Henry B.	89, 92		
Ferstmann	83		
Fickes, Alfred C.	143		
Fieldner, A. C.	41, 48, 98, 110		
Figgis, W. E.	11, 17, 20, 23, 35		
Fink, C. G.	33, 117, 129		
Finlay, James R.	7, 17, 24, 92, 153, 155, 157		
Firket, V.	10, 20, 95, 116, 119, 126		
Fischer, Jos.	58, 138		
Fisken, John B.	129, 133		
Fitzgerald, F. A. J.			
Flagg, Arthur L.	1, 8, 18, 101, 141, 146, 148		
Flagg, Samuel B.	153		
Flegel	15, 117		
Flegel, Kurt	68, 148		
Flemer, J. A.	70, 157		
Fleming, Wm. R.	110		
Flint, H. F.	5, 98, 104		
Flürsheim, B.	72, 123		
Flynn, F. N.	15, 125		
Forbes, C. R.	71, 72, 143		
Forbes, D. L. H.	5, 10, 20, 101, 104, 106		
Ford, W. E.	39		
Forgver, E.	61, 65		
Formis, Andre	71, 76, 88, 92, 143		
Forstall, A. W.	38, 110		
Forstmann	41, 85		
Fortini, V.	36, 110		
Foster, Rufus J.	41, 153		
Frasch, Herman	56, 68		
Free, E. E.	67, 68, 110, 148		
French, Harold	5, 10, 110, 115, 129		
French, W. E.	40, 77, 85		
Freycberg, Max	138, 143		
Freyen, Heinrich J.	26, 135, 138, 141		
Friedensburg, F.	41, 51, 68, 86		
Frieser, Anton	41, 149		
Friz-Zabrze, W.	53, 54, 141		
Fry, Thomas W.	51		
Fry, Wm. H.	150		
Fuller, John T.	78, 90		
Fullerton, R. M.	78		
Fulton, Charles H.	15, 123, 125		
Futers, T. Campbell	48, 143		
		G	
Gaines, Richard H.	29, 110		
Galy-Ache, M. P.	17, 28, 123, 125		
Garcia, John A.	41, 48		
Gardner, R. F.	69, 152		
Garfias, V. R.	56		
Garforth, W. E.	51, 52, 83		
Garrett, Frank	32, 110		
Gascoyne, Rowland	1, 66, 74, 86, 92, 99, 101, 106, 125		
Gaskill, J. C.	41, 77, 86		
Gastaldi, E.	105, 112, 123, 126		
Gates, Arthur O.	99, 106		
George, R. D.	8, 56, 71, 149		
Gerhardt, R. B.	24, 26, 121		
Gerke, Arthur	48, 143		
Geyler, Walter	67, 90		
Gibson, Geo. H.	136		
Gibson, Thos. W.	1, 8, 12, 24, 36, 56		
Gieser, H. S.	5, 99, 101, 103, 104		
Gifford, W. S.	27, 118, 129		
Gilbert, H. N.	128		
Gilbert, L. D.	61, 129		
Giller, R. T.	48, 134, 143		

- Gilman, G. H. 75
 Gilmour, Jas. L. 75, 78, 92
 Giolitti, F. 28, 29, 118
 Girder, Richard L. 34, 110
 Glaser, Fritz 38, 39, 110
 Glasnapp 68
 Glenn, L. C. 42, 149
 Gleser, H. S. 77, 86
 Glomann, C. K. 51, 77, 83
 Gmeynier, Ernst 48, 50, 81, 99
 Gobiet, Alfred 53
 Goerens, P. 28, 125
 Gold, Karl 50, 71, 129, 143
 Golowatschew 15, 118
 Gooch, F. A. 39, 110
 Gooding, H. L. 12, 81, 129
 Goosman, J. G. 5, 99, 104
 Gordon, C. H. 24, 146
 Gordon, J. M. 42, 76, 137
 Gordon, Lucien W. 42, 76
 Gottsberger, E. Britton 12, 94, 106, 125
 Gottschalk, Hans 152, 157
 Gould, C. N. 56, 60, 149
 Gouvy, Alexandre 53, 54, 141, 156
 Gracetti, V. C. 88, 153
 Gradenwitz, Alfred 42, 76, 110, 129, 135, 137, 143
 Graefe 48, 91, 129
 Grahn 51, 71, 134
 Grammer, F. L. 26, 110, 121
 Graton, L. C. 17, 148
 Graves, W. H. 1, 8, 10, 33, 99, 101, 104, 106, 118, 129, 149, 156
 Gray, F. W. 42, 48
 Green, Morris 104, 125
 Gregory, H. E. 149
 Grider, Richard, L. 110
 Grillo, G. 68, 94
 Grob, W. 64, 68, 109
 Groeling, A. E. von 52, 54, 140
 Gross, Edward L. 48, 110
 Gross, John 5, 10, 101, 104, 123, 125
 Grothe, A. 2, 8, 94, 104, 106, 149
 Grunberg, F. 103
 Grunsky, C. E., Jr. 2, 8, 89, 104, 107, 149
 Guenther, E. 22, 115
 Guess, George A. 15, 118, 125, 141
 Guillet, Leon 28, 31, 36, 123, 125
 Gunsolus, F. H. 42, 72, 73, 86, 157
 Gunther, Hanns 20, 31, 32, 35, 129
 Gunthersberger, J. 51, 83, 86
- H
- Haas, Frank 50, 141, 156
 Haas, Herbert 59, 74, 129, 137
 Haber, F. 115
 Hachita, M. S. 48, 110
 Hadley, A. E. 129, 133, 134, 137
 Hafer, Claud 2, 12, 24, 62, 67, 149
 Hageman, H. H. 78, 137
 Hager, Dorsey, 56, 149
 Halek, Anton 71
 Hallwood, E. A. 51, 123
 Halnes, Samuel 83, 86
 Hall, Albert E. 71, 107
 Hall, Clarence 73, 86
 Hall, Ernest K. 7, 149
 Hall, Frank 2, 8, 12, 18, 21
 Hall, John Howe 27, 118
 Hall, R. Dawson 42, 48, 50, 56, 83, 86, 129, 143, 156
 Halbaum, H. W. 42, 153
 Hallet, R. L. 36, 110
 Ham, C. W. 137
 Hamilton, E. M. 10, 37, 104, 125
 Hamilton, Wm. E. 48, 143
 Hancock, Walter C. 62
 Handley, H. L. 48, 143
 Handy, R. S. 10, 18, 20, 99, 101, 107, 113
 Hanley, Robert H. 75, 143
 Hanriot, M. 11, 17, 31, 37, 123, 125
 Hansell, N. V. 26, 101, 118
- Hansen, Nic. L. 73, 123
 Harden, John 27, 118, 129
 Harder, Edmund Cecil 24, 32, 146
 Hardinge, H. W. 5, 99, 126
 Hardy, Wm. 42, 86, 110
 Harger, John 42, 51, 83, 86, 110
 Harrington, Joseph 50, 137
 Harris, B. F. 48, 129, 143
 Harrison, P. S. 15, 110
 Hart, E. Edward 138
 Hart, G. Stephen 7, 29, 149
 Hartman, W. B. 53, 55
 Haultain, H. E. T. 149
 Hawkins, Alfred C. 39, 68, 146
 Hauptick, E. de. 2, 5, 8, 11, 12, 38, 39, 94, 110, 146, 149
 Hausenfelder, R. 55, 121
 Hayes, Ellwood 31, 32, 36, 118
 Heath, T. H. 137
 Heather, H. J. S. 92, 130
 Heaton, Noel 66, 110, 118, 123
 Heck, C. 53, 55, 110
 Heckel, W. 53, 55, 68
 Heckmann, Wilhelm 48, 50, 68
 Heggen, A. S. 42, 57
 Helkes, Victor C. 2, 8, 12, 18, 21, 94
 Heindl, Alexander J. 56, 149
 Heinrich 42, 36
 Heinrichs, Ernest H. 38, 94
 Heitchen, Paul 58, 123
 Hempelmann, Ernst 16, 120
 Henderson, H. G. 71
 Hendryx, Wilbur 5
 Henning, F. 122, 123
 Herberst, H. 143
 Herbing, Dr. 56, 67, 69, 149
 Hering, Carl 115, 118, 130
 Heriot, E. Mackay 18, 82, 74, 149
 Heroult, P. L. V. 27, 115, 118
 Herr, H. T. 76, 137
 Herrmann, S. 39, 115
 Herrmann, Fritz 29, 31, 32, 36, 110, 130
 Herz, Nathaniel 134
 Herzfeld, R. 76
 Herzig, C. S. 5, 10, 98
 Hesnse, A. W. 42, 59, 83
 Hesse, Bernard C. 110, 156
 Hevesy, G. von 110, 115
 Hewitt, A. J. 73
 Heym, W. 5, 24, 26, 28, 29, 48, 69, 73, 101, 104, 107, 115, 118, 121, 125, 126, 143, 146
 Heyn, M. E. 29, 31
 Hibbert, E. 2, 8, 12, 78, 78, 130
 Higgins, Will C. 12, 18, 21, 67, 101, 107, 149
 Hill, D. U. 39, 110
 Hillebrand, W. F. 16, 39, 101, 107
 Hills, Leon P. 5, 10, 104, 107, 126
 Hills, Victor G. 33, 99, 107, 118, 149, 157
 Hilpert, Siegfried 29, 31, 32, 36, 110, 130
 Hinckley, A. T. 129
 Hinds, Henry 42, 110, 133
 Hinrichsen, F. W. 29, 31, 42, 59, 61, 110, 123, 126, 140
 Hirschfield 135, 136
 Hirshberg, L. K. 8, 11, 17, 23, 31, 36, 42, 55, 83, 110, 130, 146, 157
 Hirshberger, Chas. A. 71, 74, 130, 134
 Hof, Hans 69, 101, 110, 149
 Hoffman, F. L. 42, 83, 89
 Hoffman, H. O. 20, 118
 Holde, D. 58, 140
 Holcombe, J. P. 5, 10, 98, 99, 101, 107, 134
 Holden, Edwin C. 12, 18, 21, 24, 61
 Hole, Allen David 149
 Holmes, J. A. 48, 83, 143
 Holloway, B. E. 59, 140, 143
 Homan, John G. 28
 Hood, O. P. 42, 44, 50, 57, 87, 99, 153, 154
 Hopwood, J. M. 130
 Hore, Reginald E. 8, 12, 25, 36, 70, 94, 101, 104, 107, 118, 126, 148, 146, 149, 155
 Hormann, Dr. 58, 138, 140
 Hornaday, W. D. 57, 154
 Hevesy, G. von 38
 Howard, J. C. 57
 Howard, Leslie E. 27, 118

Howard, L. O.	13, 15, 20, 22, 90, 101, 118, 141, 157	K	
Howe, Ben	5, 118		
Howe, Henry M.	26, 30, 118, 123	Kaufmann, A.	73, 123
Howell, Spencer P.	73, 86	Keely, Josiah	48, 50
Howison, James	7, 133	Kegel	76, 83, 92
Hoyer	42, 94, 149	Keldysch, W.	62
Hoyt, Warren A.	62	Keller, Harry F.	11, 101
Hubbard, J. D.	89, 99, 104, 107	Kelley, P. K.	21, 94
Hubbard, L. L.	13, 74, 148	Kellogg, L. O.	80
Hubbard, Prevost	65	Kemp, James F.	71, 76, 149
Huber, J. R.	31, 123	Kennedy, J. C.	5, 99, 101, 103, 107
Hueser, Frederick	121	Kenner, Alvin R.	5, 99, 107, 118
Hughes, Ben	2, 8	Kent, Robert Thurston	138
Hülsdell, Georg	48	Kent, Wm.	139
Humery	33, 133, 147	Kern, Howard F.	35, 115, 118
Humphrey, J. C. W.	29	Kershaw, John B. C.	13, 27, 94, 115, 118, 130
Humphrey, H. A.	138	Keyes, Charles R.	18, 94, 156
Hundeshagen, Franz	65, 110	Kidder, S. J.	5, 10, 103, 105
Hunt, Robert W.	27, 28, 118, 123	Kidson, Wm. Lyle	143
Huntley, G. N.	48, 110, 123	Kimball, Clinton	143, 157
Huntoon, Louis D.	99, 103	King, Austin	42, 77, 86, 111
Hurter, Charles S.	25, 73	Kirschmann, W.	149
Hutchin, H. W.	35, 149	Kissa, M.	109
Hutchinson, J. W.	5, 104, 107, 118, 126	Klinckowstroem, Karl von	70, 92
Hutchinson, Rollin W., Jr.	143, 157	Klugh, B. G.	26, 30
Hutton, James	5, 99, 105, 110	Knapp, I. N.	60, 65, 149
Hueser, Frederick	29, 126	Kneeland, Frank H.	42, 48, 76, 81, 130, 137
Hyde, A. L.	73, 110	Knight, Cyril W.	150
Ihsen, Georg	39, 110	Kneckenhauer, B.	88, 92, 149
Ilgen	74, 81	Knopf, Adolph	7, 8, 18, 146, 150
Illies, Hermann	27, 118	Knothe, Walter	61, 111
Ilsey, L. C.	41, 51, 77, 122, 128	Knox, Geo.	42, 79, 92
Ingalls, H. W.	2, 8, 13, 18, 18	Kneuse, Homer V.	86, 92
Ingalls, W. R.	22, 94, 101, 115, 118	Knudsen, E.	15, 119
Irvin, Donald F.	98, 101, 105, 113, 123, 126	Koch, Walter E.	101, 105, 107, 123, 150
J		Koenigsberger, John	111, 150
Jackling, D. C.	13, 94, 107, 143	Koepel, Edward	15, 107
Jacobs, E.	2, 5, 13,	Kohlmeyer, Ernst J.	20, 111
15, 18, 21, 22, 42, 94, 101, 105, 118, 126, 141		Kohlschutter, V.	10, 115, 116
Jaffe, Richard	101	Kolbe, Ludwig	73, 86, 134
James, Alfred	5, 8, 99, 103, 105, 118	Koneczny	130
James, George A.	113, 118	Korzoukin, I. A.	57
Jamison, C. E.	57, 149	Kozu, S.	66, 68, 150
Jandorf, M. L.	16, 149	Kraemer, G.	59, 111
Janin, Charles	2, 90	Kranz	83, 86
Jansen, G.	73, 143, 154	Krapf, Emile F.	38
Jarvis, R. P.	24, 146	Kratky, Anton	31, 39, 116
Jenker, E.	53, 55	Krauth, O.	2, 8, 13, 18, 21, 25, 32, 36, 38, 39, 42, 57, 150
Jens, J. S.	42, 130	Kritzer, W. H.	86, 105
Jensen, E.	5, 99, 101, 126	Krueger, A. E.	42, 51, 77
Jessup, D. W.	7, 8, 13, 25, 74, 78, 143, 146, 149	Krug, Karl	111
Jimenez, Carlos P.	2, 8, 13, 18, 34, 42, 57, 65, 69, 83, 94	Krugh, O.	33, 130
Joachim, H.	73, 123	Kruuse, C.	81
John, W. E. von	31, 37, 111, 113	Kuhl, Hans	61, 141
Joly, J.	149	Kuhn, H. A.	42, 53, 99
Johnson, C. M.	33, 111	Kuhnel, R.	62, 126, 143
Johnson, F.	17, 23, 31, 126	Kupfer	77, 92, 123
Johnson, J. E., Jr.	26, 118	Küppers, E.	130, 137, 139
Johnson, W. Dawson	156	Kushlan, Max	
Johnston, W. H.	78, 92	L	
Jones, C. R.	156	La Grand, Chas.	13
Jones, Harry C.	111	Laciere, A.	25, 146
Jones, J. Claude	8, 25, 146, 149	Lagemann, Paul	86
Jones, Louis Cleveland	50, 92	Lake, E. F.	27, 33, 119
Jones, W. R.	149	Lake, W. H.	130, 137
Jordon	99, 118	Lakes, Arthur	8,
Jorissen, A.	33, 48, 111	18, 21, 22, 78, 92, 118, 126, 133, 143, 150, 157	
Juan, Blanquier	149	Lamb, R. B.	5, 105, 126
Junge, F. E.	77, 135, 137, 138	Lammie, Benjamin G.	130
Jüngst, Ernst	42, 53, 55, 94	Landes, Henry	42, 150
Juretzka, Franz	22, 94, 118, 126	Lane, Alfred C.	16, 150
Jutson, J. P.	2, 149	Lang, Herbert	59, 89, 111, 119, 121, 126, 155, 157
		Lange	15, 118
		Langerfeld, Arthur	42, 48
		Larcombe, C. O. G.	7, 150
		Larsen, Clarence L.	78
		Lass, W. P.	5, 111
		Laucks, I. F.	7, 17, 157

AUTHORS' INDEX

Law, Edward F.	27, 119, 130	Matz, Hugo	29, 119
Layng, Haral R.	5, 10, 105, 111	Maurer, Robert H.	18
Le Rossignol, R.	115	Maujer, A. R.	50, 111, 139
Lecocq, Eugen	58, 55, 141	Maurice, Wm.	79, 86
Lednum, E. T.	71, 75	Maurice, Wm.	130
Lee, Geo. B.	15, 99, 119, 141	May, Karl A.	18, 81
Leese, John S.	139	McArthur, John S.	5, 106, 126
LeGrand, Chas.	130, 134, 137	McCallie, S. W.	2, 107, 146
Leith, C. K.	25, 150	McCaskay, H. D.	95
Lejeune, Arthur S.	7, 98	McCaughay, W. J.	150
Lemaire, M. Emmanuel	51, 79, 86	McCollum, Burton	131
Lemberger, Otto	71	McCombie, J.	2
Lenher, Victor	5, 7, 150	McDermott, Jos. B.	42, 73, 83, 144
Leslie, Hugh M.	103, 105	McDonald, P. B.	21, 25, 68, 69, 71, 95, 102, 133, 150, 154
Lessing, R.	48, 111	McFarland, J. R.	81, 144
Letcher, Owen	2, 74, 95, 99, 103, 107	McGovern, R. A.	18
Lett, Stephen J.	70	McIntyre, J. K.	137
LeVeque, G. E.	70, 81	McIntyre, J. B.	43, 82, 144
LeViers, H. L.	50, 89	McLeish, John	2, 9, 13, 18, 25, 36, 43, 57, 64, 95
Levings, J. H.	107, 119, 126	McLuckie, John	50, 79, 92
Levy, Leonard A.	83, 86	McMillen, R. H.	111, 119, 126
Lewis, J. H.	18, 21, 68	McMurtry, G. C.	6, 15, 32, 119
Lewis, John H.	76, 133	McQuigg, C. E.	121, 126, 141
Lewis, J. Volney	111, 146	Mead, H. L.	2, 76, 90
Lewis, Vivian B.	73, 86, 123	Megraw, Herbert A.	6, 11, 98, 99, 102, 108, 106, 107, 144, 150
Libby, Edwin S.	157	Meissner, C. A.	53
Libert, J.	10, 20, 95, 116, 119, 126	Meithe, Dr.	77, 83, 86
Liebreich, Erik	30, 111, 116	Meller, Karl	130
Lincoln, Francis Church	146	Mellor, E. T.	7, 150
Lindgren, Waldemar	11, 111, 150	Mellor, J. W.	33, 34, 62
Lindt, Dr.	22, 102	Mendenhall, W. C.	92, 154, 155
Lingke, A.	8, 18, 21, 64, 68, 92	Menzel, Wilhelm	15, 20, 102, 116, 119, 123
Lisse	52, 80, 92, 130	Menzin, A. L.	59, 137, 140
Livingstone, D. C.	111, 156	Mercer, H. T.	13, 15, 63, 74, 100
Liwehr, August Eugen	71	Merrill, Geo. P.	7, 11, 17, 20, 23, 32, 33, 34, 36, 64, 150, 157
Lloyd, W. D.	81	Merwin, H. E.	39
Locke, Charles E.	5, 98, 99, 102, 103	Merz, A. R.	69, 152
Lockett, C. C.	76, 130	Metzger, F. J.	31, 32, 111, 141
Lockmann, Georg	64, 111, 156	Meunier, Jean	52, 77
Loeffler, Peter	78, 156	Meyer, H. Conrad	35, 66
Lof, E. A.	130, 133	Meyer, Theodore	64, 141
London, W. J. A.	137	Meyers, David Moffat	137, 140, 141
Longmuir, Percy	29	Michenfelder, C.	126, 144
Loop, Carl R.	48, 86, 123	Michiels, Louis	33, 111
Lord, J.	119, 155	Middleton, Albert B.	27
Lovejoy, D. F.	48, 141	Milbayer, Jaroslav	30, 111, 114
Low, H. R.	137	Milford, Leslie Russell	68, 111
Lucas, F. E.	53, 55, 141	Miller, Benjamin L.	67, 100, 102, 150
Lüch, Hugo	69, 146	Miller, H. F. Jr.	27, 29, 121, 123, 138
Lull, Edward L.	25, 26	Miller, Willet G.	9, 150
Luten, Daniel B.	62	Miller, Wm.	150
Lyman, G. E.	50, 83	Millington, W. E. W.	76
Lyon, D. A.	26, 119, 130	Mills, C. E.	13, 95
M		Milns, W. E.	130, 139
Macco, A.	89, 92	Minor, W. H.	52, 83
Macdonald, J. A.	66, 150	Mintrop, L.	92, 150
Macdougall, C. W.	74, 79	Mitten, L. F.	43, 82, 137
Macduff, R. B.	5, 102, 105	Modderwell, C. M.	43, 49
Mace, Clement H.	13, 15, 20, 81, 119, 138, 144	Moll, Frederick	70, 141, 155, 158
Maenické	70, 71	Montanus, H. H.	92, 156
Maguire, Don	2, 90, 156	Moorhie, Th.	48, 144
Malcolmson, James W.	89, 102, 105, 130, 135, 137, 140	Moore, Charles J.	2, 18, 150
Mann, E.	53, 55, 137	Moore, Ernest V.	54, 140
Manning, Isaac A.	2, 8, 13, 16, 25, 42, 57	Moore, Elwood S.	7, 43, 147, 150
Mansfield, G. R.	151	Moore, J. B.	74
Manz, H.	34, 96, 111	Moore, Malcolm S.	35, 98, 150
Marcusson, J.	59, 111, 123	Moorhead, A. J.	46, 50, 89
Marks, Lionel	137, 140	Moorhead, Maxwell K.	57
Marrs, L. E.	31, 32, 111, 141	Morrisby, Percy	105, 126
Martell, Paul	15, 27, 35, 95, 119, 156	Morse, Chas. W.	76, 144, 158
Martin, A. H.	2, 9, 13, 15, 57, 59, 90, 119, 141, 155	Moses, Thomas	43, 86
Martin, G. A.	13, 102, 122	Moss, White L.	43, 83, 86
Masing	81	Mossman, R. L.	130
Masselos, E.	27, 30, 99, 107, 116, 119	Mowat, David M.	43, 77
Matchoss, Conrad	95, 156	Mowatt, J. F.	123, 141
Mathers, Frank C.	20, 116, 119, 130	Mueller, Frank E.	48
Matters, C. W.	92	Mugge, O.	69, 150
Matthews, Isaac A.	42	Muir, Douglas	74, 76, 82, 158
Matthews, J. W.	76, 130	Müller, Eugen R. E.	32, 64, 111
		Müller, W.	15, 28, 29, 31, 35, 36, 37, 39, 119
		Munn, M. J.	60, 150

AUTHORS' INDEX

xix

- Munroe, Henry S..... 6, 11, 20, 22, 100, 102, 105, 107, 111, 119, 126
- Murdoch, Joseph 17, 146
- Murphy, R. K..... 113, 156
- N**
- Nathorst, A. G..... 150
- Nathorst, Harry J. H..... 26, 102, 144
- Neale, R. E..... 137
- Neill, J. M..... 6, 103
- Neitzel 78, 123
- Nelson, Robert 43, 130
- Nelson, Wilbur A..... 43, 50, 141, 150
- Neuberger, Henry 57, 59, 150
- Neumann, B..... 27, 29, 116, 119
- Neumark, Aug. S..... 111
- Nevius, J. Nelson 15, 119, 141
- Newton, C. G..... 180, 133
- Nicholas, Francis C..... 119
- Nickles, John M..... 150
- Nicol, J. M..... 92, 156
- Nicou, Paul 26, 116, 119
- Noble, Algernon 13, 43, 57, 150
- Noblet, Paul 65, 109
- Norkus 43, 71, 75
- Northrup, Edwin F. 20, 23, 32, 35, 39, 65, 119
- Norton, Thomas H..... 66, 111, 130, 158
- Norwood, C. J..... 43, 78, 83, 86, 130
- Notham, Arthur 16, 150
- Noyes, W. S..... 57, 135
- O**
- Oates, Herbert 78, 158
- Offerhaus, C..... 22, 111
- Ohern, D. W..... 57, 150
- Ohlson, A. L..... 130, 137
- Oram, Wm..... 9, 14, 19, 45, 73, 78, 95
- Ormandy, W. R..... 62, 130
- Orzner, Edward H..... 102
- Osborne, T. H..... 65, 126, 161
- Ostergren, Oscar P..... 135
- Overman, O..... 20, 116
- P**
- Painter, S. H..... 43, 71, 134
- Pallister, Hugh D..... 43, 49, 151
- Palmaer, W..... 65
- Palmer, Chase A..... 6, 11, 105, 107, 111, 151
- Palmer, Leroy A..... 2, 92, 102, 105, 155
- Pantjuchow, N..... 64, 66, 69, 111
- Pardae, J. T..... 65, 151
- Park, James 71, 151
- Parker, E. W..... 7, 11, 17, 18, 21, 25, 43, 59, 61, 67, 92, 95
- Parmaee, H. C..... 6, 82, 105
- Parmo, A..... 53, 55, 86, 131, 134, 135, 139, 141, 144
- Parsons, Chas. L..... 33, 38, 95, 151
- Pascoe, J. N..... 6, 21, 102, 105, 107
- Passow, Hermann 61, 122, 141
- Faton, J. Drummond 12, 79, 86
- Paul, James W..... 50, 52, 88, 86
- Pauly, K. A..... 82, 131, 134
- Pawreck, Heinrich 15, 28, 37, 66, 67, 116, 119
- Paxmann, D..... 69
- Payne, Henry Mace 2, 90, 131, 133
- Peabody, E. H..... 59, 141
- Peale, A. C..... 151
- Pearce, W. C. Walworth 35
- Peck, Frederick B..... 61, 69, 123
- Peck, W. R..... 43, 49, 151
- Pederson, Harold 15, 36, 116, 119
- Feebles, B. C..... 27, 28, 122, 135, 137, 140
- Feebles, T. A..... 137
- Percival, J. B..... 2, 90
- Percy, E. N..... 135
- Perkins, Frank C. 43, 71, 91, 131, 133, 136, 144
- Perrett, Frank A..... 151
- Perry, Edward W..... 144
- Pertusi, C..... 105, 112, 123, 126
- Peter, Alfred M..... 50, 140
- Peters, O. S..... 181
- Peterson, Frank F..... 59
- Peterson, Peter E..... 22, 102, 119, 126, 131
- Petit, Victor 84
- Petascheck, W..... 43, 60, 151
- Pflucker, German E..... 7, 151
- Phalen, W. C..... 68, 151
- Phillips, Drury McN..... 60, 152
- Phillips, Geo. L..... 43, 82
- Phillips, V. B..... 137
- Phily, F..... 66
- Pierce, John 59, 135
- Pitavel, Robert 28, 31, 37, 39, 64, 66, 105, 116, 119
- Pittman, E. F..... 85, 151
- Plock, Albert F..... 26, 50, 55, 86, 123, 142, 144
- Pogue, Jos. E..... 18
- Poizat, C. du..... 32, 36, 95, 126
- Polster, G..... 102, 155
- Poole, Cecil P..... 181
- Pope, George S..... 48, 98
- Popescu, Nicholas J..... 72
- Popper, Josef 48, 86
- Porter, Horace G..... 52, 112, 140
- Porter, John Jermain 27, 119
- Portilla, F..... 26, 126
- Potonie, H..... 43, 151
- Potter, A. E..... 59, 135
- Powell, J. W..... 43, 51, 79, 80, 86
- Pratt, John L..... 43, 84, 86
- Pratt, W. E..... 1, 8, 18, 40, 93
- Prest, Walter H..... 7, 147
- Price, S..... 89
- Price, W. T..... 135
- Price, Wm. Z..... 43, 84
- Proctor, Olin S..... 48, 144
- Proske, O..... 20, 112, 120
- Frost, Eug..... 22, 112, 126
- Prutzmann, Paul W..... 57, 112
- Pryor, J. W..... 43, 86, 89
- Puisifer, H. B. 16, 20, 22, 98, 112, 120, 126
- Purdue, A. H. 21, 89, 147, 151
- Purlington, C. W..... 2, 7, 90, 95, 144, 151
- Pütz, O. 20, 22, 25, 43, 84, 86, 100, 102, 131
- Pütz, O. 20, 22, 25, 43, 84, 86, 100, 102, 131
- Putnam, W. R..... 57, 131, 133, 137
- Q**
- Quiring, H..... 43, 151
- R**
- Raeffier, F..... 43, 65, 151
- Rakusin, M. A..... 57, 65, 112, 124
- Ramsay, Wm..... 112
- Randell, John 6, 9, 11, 105, 126
- Rash, Frank D..... 43, 84, 89, 154, 158
- Rath 48, 75, 144
- Read, Henry 66, 116
- Read, Thomas T..... 13, 129, 134
- Read, Thomas 2, 6, 9, 19, 21, 25, 32, 35, 36, 38, 43, 57, 64, 126
- Rechtenwald, J..... 43, 49, 52, 84, 90, 95, 144
- Redepenning 16, 120
- Reed, Frank 77, 86
- Reef, A. J..... 48, 51, 89
- Reeks, Margaret 156
- Reeser, H. C..... 60
- Reeve, Chas. S..... 64, 65
- Reichel, J..... 53, 55, 112
- Renwick, C. W..... 16, 144
- Reybold, A. W..... 53
- Reyes, F. D..... 61, 112

AUTHORS' INDEX

- Reynolds, Alleyne 27, 28, 120
 Reynolds, Sim 43, 77, 80, 87
 Reynolds, W. H. 43, 73, 77, 80
 Rhodes, W. B. 76, 107
 Rice, Claude T. 13, 72, 75, 79, 82, 87, 89, 144, 158
 Rice, E. E. 71, 151
 Rice, Geo. S. 44, 52, 57, 60, 73, 78, 84, 87, 131, 154
 Richards, Frank 44, 72, 73, 75, 131, 134
 Richards, Joseph W. 28, 31, 37, 39, 67, 116, 120, 131
 Richards, Robert H. 102, 107, 108, 124
 Richards, R. W. 66, 71, 149, 151
 Richards, W. B. 44, 151
 Richards, William 112
 Richardson, J. B. 35, 93, 108
 Rickard, Forbes 7, 9, 38, 151
 Rickard, T. A. 93
 Ridell, John 82, 144, 158
 Riebling, W. C. 61, 112, 124
 Ries, Heinrich 62, 124
 Riley, Smith 93, 154
 Rippert, P. 142, 155
 Ritter, Etienne A. 2, 13, 21, 108, 151, 157
 Robbins, P. A. 6, 95, 102, 108
 Robertson, T. D. 27, 28, 120, 131
 Robertson, Wm. Fleet. 2, 9, 13, 19, 21, 44, 53, 95
 Robinson, F. C. 59
 Robinson, W. O. 66
 Roessler, H. A. 20, 22, 100, 108
 Rodgers, Jas. L. 69
 Rodgers, W. R. 133
 Rogers, Alexander P. 2, 89, 90, 93
 Rogers, Austin F. 66, 151
 Rogers, J. D. 48, 151
 Rogers, J. W. 137
 Rogers, R. 105
 Rogers, R. B. 6, 11, 100, 102
 Rollandet, G. J. 16, 102, 108, 126
 Ropiequet, R. W. 48, 144
 Ross, E. B. 62, 131
 Rosenberg 82, 115
 Rosenblatt, G. B. 16, 120, 127, 131
 Rosenhain, Walter 29
 Rosenweig, Sigfried 137
 Ross, W. H. 69, 152
 Rowan, Henry 44, 84, 87
 Rozsa, Michael 69, 147, 151
 Ruhl, Otto 19, 21, 38
 Rule, R. A. 72
 Russell, H. A. 32, 131
 Russell, H. Y. 75, 79, 134
 Russell, W. S. 44, 91
 Russell, Will C. 72, 75
 Ryba, Gustav 44, 84, 87
 Rzehulka, A. 93, 147
- Sachse, H. 61, 124
 Sadler, S. P. 57, 112
 Saint, T. A. 79, 87
 Salazar, S. L. 2, 8, 94, 104, 106, 149
 Salomone 32
 Salt, W. G. 44, 82
 Sampson, Charles C. 135, 142
 Sampson, R. J. 43, 151
 Sauer, Robert Max 44, 69, 72, 76, 77, 82, 87, 93, 131, 134, 135, 137, 144
 Sautercracker, Karl 95
 Sauveur, Albert 29, 30, 123, 127
 Sawyer, A. H. 16, 100, 102
 Sborgl, U. 116
 Schaay, J. H. 65, 147
 Schacht, Alfred 76, 91
 Schacht, Hermann 10, 115
 Schadel, W. F. 48
 Schaeffer, John A. 20, 112
 Scheller, A. 57, 59, 112, 124
 Schenck, Rudolph 16, 120
 Scmid, Hugh S. de. 67
 Schmidt, F. 16, 22, 37, 116, 120
- Schnatterbeck, Charles C. 11
 Scholler, W. R. 82, 113
 Scholz, Carl 30, 44, 48, 144
 Schomberg, W. 27, 39, 55, 76, 127, 131, 135, 137, 140, 142
 Schonberg, A. C. 35, 90, 102
 Schott, O. 61, 73
 Schöttler, R. 124, 134
 Schreiber, J. 28, 121, 142
 Schultz, A. R. 66, 151
 Schultz, W. 82, 144
 Schulz, E. H. 39
 Schulz, Fred 59, 68, 114
 Schulz, M. R. 137, 140
 Schürmann, E. 64, 68, 112
 Schwarz, E. H. L. 151
 Schwarz, L. B. 72, 75
 Schwenn, R. 120, 131
 Scobee, Barry 44, 91, 137
 Scott, A. L. 144
 Scott, E. Kilburn 37, 44, 75, 82, 87, 93, 131, 144
 Scott, Geo. Stuart 2, 39
 Scott, Herbert K. 16, 19, 21, 25, 32, 44, 147
 Seaver, Kenneth 28
 Seeley, Elwyn E. 44, 62
 Segaud 33, 133, 147
 Seidenschnur, F. 79, 93
 Seidl, Kurt 44, 82, 89
 Seldon, Wm. 156
 Semple, C. Carleton 73, 131
 Shaefier, John A. 67, 120
 Shaler, Millard K. 140, 142, 157
 Sharwood, W. J. 108, 104, 105, 106, 112, 113, 122, 125
 Shaw, W. Bolton 44, 84, 90, 131, 139
 Shelby, W. W. 83
 Sheldon, G. L. 8, 7, 9, 13, 19, 93, 157
 Shellshar, W. 102, 124
 Shephard, Frank E. 26, 102
 Shorgl, U. 34
 Shrenk, Hermann von 79
 Shubart, Benedict 44, 49, 131, 144
 Shulz, E. H. 30, 31, 124
 Shurick, A. T. 44, 62, 156
 Siebenthal, C. E. 19, 21, 95
 Siebert, Frank M. 141
 Sill, Harley A. 11, 100, 105, 108
 Sill, Rush T. 11, 100, 105, 108
 Simmersbach, Oscar 28, 44, 48, 53, 54, 55, 61, 112, 124, 136, 142
 Simmons, Jesse 3, 6, 9, 73, 76, 79, 82, 89, 91, 100, 103, 106, 127, 131, 135, 144, 151
 Simon, Sidney 131
 Simonds, Ernest H. 6, 100, 102, 105, 124
 Simonds, F. M. 9, 13, 75, 89
 Simpson, W. Evan 8, 13, 133, 144
 Sinclair, Jos. H. 44, 49
 Singewald, Jos. T., Jr. 33, 151
 Smallwood, Julian C. 136
 Smith, C. D. 138, 140
 Smith, Earl B. 76, 137
 Smith, Geo. Otis 44, 151, 154, 155
 Smith, H. Hardy 16, 102, 108, 113
 Smith, J. 28, 122, 131
 Smith, J. Fawson 9, 13, 19, 25
 Smith, John J. 93, 144
 Smith, Lyon 6, 20, 105, 120, 127
 Smith, Phillip S. 3, 35, 91, 93
 Smith, Warren D. 7, 26, 44, 57, 151
 Smyth, C. H., Jr. 112, 147
 Snider, L. C. 19, 21, 44, 57, 65, 67, 108, 120, 151
 Sonnenschein 44, 66, 67, 69, 151
 Sonntag 11, 95
 Sopwith, S. F. 44, 80, 131
 Spaulding, C. F. 6, 105
 Sperr, F. W. 13, 147
 Spicer, C. N. 6, 100, 102, 127, 142, 144
 Spitzer, Fritz 30, 111, 116
 Springer, J. F. 25, 67, 68, 75, 87, 95, 142, 147, 152
 Stadler, H. 100, 102, 113
 Stansbie, J. H. 11, 16, 17, 23, 64, 65, 112, 116
 Statz, B. A. 9, 13, 19, 21, 93, 127, 152, 157
 Steager, J. A. 37, 132

- Steele, Heath.....16, 17, 93, 98, 108, 155
 Steinmetz, C. P.....131
 Stella, A.....25, 152
 Step, Joseph.....38, 142, 147
 Stephan, M.....16, 36, 116, 120
 Sterrett, Douglas B.....67, 95, 152
 Stevens, Blamey.....39, 152, 155
 Stewart, John.....63
 Still, Alfred.....131
 Stilwell, L. B.....89
 Stoklasa, Dr.....38
 Stone, S. R.....20, 22, 30, 31, 32, 48, 108, 133, 136, 137
 Stopnewitsch, A. D.....60, 112, 152, 157
 Storms, William H.....7, 57, 70, 79, 93, 95, 142, 152, 156, 158
 Stoughton, Bradley.....29, 30, 31, 33, 120
 Stovall, Dennis H.....3, 13
 Stow, Audley H.....44, 48, 152
 Strahl, G.....65
 Stransky, Sigmund.....57
 Strauss, Lester W.....44, 144
 Strohm, R. T.....44, 76, 93, 136
 Stroud, B. K.....57, 144
 Stubridge, Richard.....137
 Stutzer, A.....66, 67, 69
 Sullivan, M. X.....32, 66
 Surr, Gordon.....67, 124
 Sutton, John.....44, 52, 77, 84, 131, 144
 Suydam, V. A.....20, 23, 32, 35, 38, 119
 Sweetland, Ernest J.....106, 127
 Sweetser, A. L.....84, 87, 102, 127, 131
 Sweetser, R. H.....27, 122, 127
 Sweezey, R. O.....33, 152
 Swift, Theodore V. K.....25, 72, 73
 Sykes, J. Arthur.....29, 131
 Sylvester, Geo. E.....26, 44, 54, 61, 66
 Symmes, Whitman.....76
- T
- Tachon, Auguste.....59, 112, 124
 Taczk, S.....42, 110, 123, 140
 Taffanel, J. 44, 49, 52, 55, 73, 77, 84, 87, 124
 Tait, Peter G.....3, 108, 127, 144, 152
 Talbot, Benjamin.....28
 Tarr, W. A.....57, 152
 Taylor, Frederick W.....89, 158
 Taylor, Guy B.....52, 112, 140
 Taylor, H. B.....7, 9, 17, 112, 147
 Taylor, Jas.....44, 51, 84, 87, 89
 Taylor, W. A.....44, 84, 87
 Tedesco, H.....52, 73
 Teed, P. Litherland.....44, 112
 Tefft, T. A.....3, 82, 131, 144
 Teifer, W. H.....131, 134, 137
 Thau, A.....48, 54, 55
 Thayer, B. B.....13, 45, 77, 95, 102, 106, 135
 Thiel, Stadtrat.....61
 Thiele, P.....72
 Thom, W. T.....95
 Thomas, H. Spence.....9, 100
 Thomas, Kirby.....26
 Thompson, Francis A.....6, 16, 39, 102, 106, 108, 112, 127, 152
 Thompson, John.....45, 78, 87
 Thompson, J. J.....112
 Thompson, Malcolm M.....13
 Thumann, Hanns.....59, 72
 Thurston, E. C.....3, 91
 Thwaites, Fredrik Turville.....152
 Tinker, W. L.....25
 Tissington, F.....45
 Titus, R.....57, 59, 70, 72, 87
 Todd, W. S. G.....3, 152
 Tolman, C. F., Jr.....7, 17, 19, 21, 147
 Tonge, Thomas.....6, 23, 90, 102, 103, 106, 127
 Toropoff, Th.....10, 115, 116
 Tower, F. W.....76
 Traphagen, F. W.....6, 11, 20, 112, 120, 142
 Trautschold, Reginald.....69, 136, 140
 Travillion, C. E.....16, 112, 132
 Treadwell, W. D.....11, 16, 33, 116
- Trenkner.....7, 11, 17, 36, 112
 Tressont, G.....61
 Trickett, Oliver.....71, 93
 Tübben, L.....50, 51, 84, 87
 Tucker, W. C.....46, 66, 87, 89, 116
 Tupper, C. A.....19, 25, 45, 132, 133
 Turner, Henry W.....7, 11, 152
 Turner, Thomas.....28, 51, 89, 112, 120
 Turner, W. C.....66, 136, 137
 Turtington, James.....45, 69, 78, 144, 152
 Tyrrell, J. B.....3, 13, 95, 162, 157
- U
- Ubaghs, Maurice.....22, 112, 126
 Udden, J. A.....60, 66, 98, 152
 Uglow, W. L.....7, 9, 17, 25, 152
 Umpleby, Jos. B.....152
 Unger, Max.....57
 Utz, M. W.....136
- V
- Vail, Richard H.....16, 120, 127, 145
 Valentine, E. J.....35, 98
 Van Horn, Frank R.....9, 17, 36, 68, 147
 Vattier, Charles.....25, 152
 Vassiliadi, H.....20, 120, 127
 Venator, Wilhelm.....3, 9, 14, 19, 21, 25, 32, 33, 35, 38, 67, 142
 Vernon, Robert Douglas.....45, 152
 Verrill, C. S.....3, 9, 14, 19, 70
 Verschaffelt, J. E.....38, 112
 Victor, David.....52, 84, 87
 Vielitz, C.....59
 Viol, C. H.....34, 38
 Virgin, Joseph.....45, 79, 87
 Vogel, W.....87, 132
 Voit, F. W.....147
- W
- Wadleigh, F. R.....51, 144
 Waikenauer, M. C.....84, 138
 Wagener, A.....45, 54, 75, 78, 121, 124
 Wagaman, Wm. H.....66, 122, 142, 152
 Wagner, H. W.....48, 132
 Wakeman, W. H.....137
 Walcott, Chas. D.....152
 Waldo, Leonard.....158
 Walker, Arthur L.....16, 120, 142
 Walker, Edward.....102, 112, 114
 Walker, E. W.....16, 20, 32, 33, 64, 65
 Walker, George Blake.....135
 Walker, L. V.....29, 115
 Walker, P. F.....60
 Walker, Sydney F.....45, 49, 54, 89, 132, 136, 138, 142
 Walker, T. L.....33, 103, 127
 Wallace, R. G.....152
 Walsh, Wm.....9, 14, 19, 45, 73, 78, 95
 Walter, E. W.....17, 20, 142
 Ward, William F.....3, 70, 72, 124
 Waring, Gerald A.....152
 Warren, H. M.....45, 49, 132
 Warren, P. H.....75, 79, 145
 Warriner, R. C.....76, 100, 106, 108, 145
 Warwick, A. W.....6, 11, 103, 106, 112, 127
 Watkins, Joel H.....39, 65, 152
 Watson, John.....52, 78, 87
 Watts, A. C.....45, 49, 52, 73, 78, 82
 Watts, Oliver P.....28, 36, 116, 120, 132
 Webb, H. S.....45, 132
 Webster, J. P. B.....3, 14, 25
 Wedge, Utley.....16, 120, 124
 Weed, Walter Harvey.....17, 152
 Wegemann, Carroll H.....71, 152

AUTHORS' INDEX

- Weichert 74, 132
 Weinreb, F 59, 136, 139
 Weinshank, Theo. 45, 78, 127, 132
 Weintraub, E 31, 116
 Weir, William 76, 138
 Weise, Dr. 45, 124, 132
 Weiskopf, Alois 26
 Weiss, Howard F 79, 155
 Weiss, John Morris 55, 118, 124
 Weissgerber, R 28, 55, 113, 122, 124
 Weldin, Wm. A 51, 89
 Wentworth, John F 136
 Werndl, F 60, 113
 Westgate, Lewis H 152
 Weston, E. M 6, 90, 100, 108
 Wheeler, R. V 45, 52, 84
 Whinery, Samuel 89
 Whitaker, M. C 113, 156
 White, A. G. 3, 9, 17, 25
 White, Bernard S 20, 112
 White, E. E 70, 72
 White, Franklin 6, 106, 108, 108, 114
 White, J. W., Jr. 135
 Whytock, P. R 152
 Wickhorst, M. H 28, 38
 Wig, Rudolph J 62
 Wilcox, E. A 76, 134
 Wild, Edward 59
 Wilke-Dörfurt, E 67, 113
 Wilkinson, H. Fischer 93
 Willey, Day Allen 25, 145, 152
 Williams, Milton J 48, 54
 Williams, Noah 45, 152
 Williams, Wm. 45, 87
 Williamson, H. A 45, 79
 Wilmoth, L. J 6, 106, 113
 Wilson, A. C 136, 139
 Wilson, A. E 58
 Wilson, Alfred W. G 68, 95, 103, 108, 120, 134, 153
 Wilson, E. B 45, 87, 113, 140
 Wilson, Fred W 7, 17, 45, 153
 Wilson, Herbert M 45, 84, 87, 93
 Wilson, H. G 22, 108, 182
 Wilson, J. Bowie 90
 Wilson, J. R. R 45
 Wilson, Leonard 132, 145
 Wilson, Morley E 9, 36, 153
 Wilson, P 23, 122, 127, 142
 Winchell, Alexander N 153
- Winchell, Horace V 93, 154
 Winkel, Hch 59
 Winkelmann, Obering 45, 61, 62, 63, 93, 108, 124
 Wintermeyer 82, 91, 145
 Wise, Sidney L 71, 72
 Wishon, A. E 132
 Witherspoon, R. A 39, 116, 120
 Witte, R 120, 127
 Wittich, Lucius L 19, 20, 22, 23, 58, 127, 145
 Woernle, R 93, 145
 Wolff-Friedenau, Th 79, 93, 155
 Wolfkin, H. M 40
 Wollenweber 74, 81
 Wood, Henry E 33, 88, 89, 103, 106, 124, 127
 Woodbridge, Dwight E 25, 26, 103, 120
 Woodruff, E. G 58, 153
 Wooton, Paul 14, 45, 84, 95
 Worcester, S. A 89, 93, 108, 145
 Worrell, S. H 113, 138
 Wrenacre, H 45, 89, 154
 Wright, Edward T 103, 106, 108
 Wright, Silas 3, 9, 11, 91, 95
 Wunderlich, G 45, 84, 93, 153
 Wunderlich, Hans 135, 145
 Wynne-Roberts, R. O 138, 140, 153
- Y
- Yeatman, Pope 14, 93, 120
 Young, C. M 45, 49, 53, 84, 91
 Young, Geo. J 84, 87
 Young, S. W 68, 120, 142
- Z
- Zalinski, Edward R 9, 19, 147
 Zehring, W. S 3, 9, 14, 19
 Ziegler, Victor 147
 Zipp, J. P 138
 Zix 51, 79, 85, 122
 Zsigmondy, Arpad 3, 25, 45, 69, 95

Subject Index

A

Abrasives	64
Accidents in Mines and Mills	82
Accounts	89
Acetylene Mine Lights (See Lighting)	
Acids (Mineral)	64
Adits (see Tunnels and Tunnelling)	
Agitation (see Cyaniding)	
Alkali Metals	39
Alloys (Non-Ferrous)	31
Aluminum	37
Alums (see Salines)	
Amalgamation	101
Ammonium Sulphate (see Salines)	
Analysis (see Assaying)	
Anthracite (see Coal)	
Antimony	32
Arsenic	64
Asbestos	64
Asphalts	64
Assaying (see also under Gold, Silver, Copper, Lead, Zinc)	109

B

Ball Mills (see under Mill and Milling)	
Barytes	65
Base Metals (see under Thermic Metallurgy)	
Bauxite	65
Belts and Belting (see under Power and Machinery Miscellany)	
Bins and Pockets (see under Storage)	
Bismuth	65
Bitumens	65
Bituminous (see under Coal)	
Blast Furnaces (see under Furnaces)	
Blasting	72
Blowers and Fans (see under Ventilation)	
Boilers and Feed (Steam)	126
Bookkeeping	89
Boring	71
Breakers (see under Coal Preparation)	
Brick	61
Briquetting	50
Buckets	90, 142
Business Organization	155
By-Products	54

C

Cables and Cableways	90
Cadmium	88
Calciovolborthite	89
Cars and Accessories	90
Cement	61
Production	94
Centrifugal Pumps (see Pumps)	
Ceramics	61
Chamber Working	75
Charging (Furnaces)	121
Chemistry	109
Chilean Mills (see under Crushing and Grinding)	
Chlorination (see under Mill and Milling)	
Chromium	32
Clays (see under Ceramics)	

Coal—

Briquetting	50
By-Products	54
Dust	50
Economics of Mining	50
Electricity in Mines (see under Electricity)	
Explosions	52
Fields	40
Gases	50
Marketing	47
Mechanical Cutters	50
Mines and Mining	40
Miscellaneous	52
Preparation	47
Production	44
Storage	47
Testing	47
Tipples	35
Cobalt	53
Coke	54
By-Products	54
Production	94
Combustion Engines	135
Combustion, Fuels and	121
Compensation of Workmen (see under Labor)	
Compressed Air	134
Concentration	100
Concrete	61
Production	94
Conservation	154
Converters (see under Power and Machinery)	
Conveyors	142
Copper—	
Geology	16
Milling	12
Mines and Mining	12
Miscellaneous	17
Production	94
Refining	12
Smelting	12
Core Drilling (see under Drilling)	
Corrosion (Iron and Steel)	29
Cranes	142
Crushing	98
Cutters, Mechanical Coal	50
Cyaniding	101

D

Dams (see under Mine Waters)	
Decantation (see under Cyaniding)	
Diamond Drilling (see under Drilling)	
Diamonds	65
Discharging (Furnaces)	121
Distillation (see under Petroleum)	
Drafting	70
Drainage (see under Mine Waters)	
Dredge and Dredging	90
Dressing, Ore (see Ore Dressing)	
Drifts and Drifting (see under Sinking and Driving)	
Drilling	71
Driving	74
Drying	61, 98
Dust—	
Coal	
Drilling and Boring	
Flue	122
Miscellaneous	141
Dynamite	72

SUBJECT INDEX

E	
Earth and Rock Pressure.....	142
Economies of Coal Industry.....	50
Educational	155
Electric Blasting	134
Electric Furnaces (see under Electro-metallurgy).	
Electric Haulage	81
Electric Hoisting	81
Electric Smelting (see under Electro-metallurgy).	
Electric Motors	128
Electricity	128
Blasting	134
Haulage	81
Hoisting	81
Hydro-Electric In Mine and Mills.....	133
Electrochemistry	115
Electrocyaniding (see under Cyaniding).	
Electrolysis	115
Electromagnetic Ore Dressing.....	115
Electrometallurgy	115
Electrosiderurgy (see under Iron and Steel).	
Electrostatic Ore Dressing.....	115
Elevators (see under Transportation).	
Engines—	
Combustion	135
Gas	135
Gasoline	135
Oil	135
Steam	136
Emeralds (see Gems).	
Excavators	91
Exploders	72
Explosives	72
F	
Falls of Ground (see Supports).	
Fans and Blowers (see Ventilation).	
Faults (see under Geology).	
Feldspar	66
Fertilizers	65
Filters (see under Cyaniding).	
Financial	155
Fines	141
Fire Damp (see under Coal Mining).	
First Aid (see under Sociological).	
Flue Dust (see also under Iron and Steel, Wastes)	122
Flotation (see under Concentration).	
Fluorspar	66
Folds (see under Geology).	
Fuel Briquetting	50
Fuels	140
Production	94
Fumes	122, 141
Furnaces—	
Charging and Discharging	121
Electric	115
Fume, Gas and Flue Dust.....	122, 141
Practice (Iron and Steel).	27
Slags	121, 141
Walls and Lining	122
Fuses	72
G	
Gages, Water (see under Pumps).	
Gas and Flue Dust (Furnace).....	122, 141
Gas Engines	138
Gas Producers	138
Gases, Mine	77
Gasoline	68
Gasoline Engines	135
Gems	66
General Miscellany	157
H	
Generators, Electric (see under Electricity).	
Geology, Mining	153
Gold—	
Assaying	4
Amalgamation	101
Fields	1
Geology	6
Metallurgy	4
Milling	4
Mine Accounts	89
Mines and Mining.....	1
Production	94
Government Ownership	154
Graphite	67
Production	94
Gravel	61
Grinding	98
Gypsum	67
Production	94
I	
Inclines	81
Inspection	85
Iron and Steel—	
Beneficiation of Ores (and Flue Dust)	26
Flue Dust	26
Foundry Practice	29
Heat Treatment	28
Ingots	27
Mechanical Treatment	28
Ore and Mining	24
Physical Testing	28
Production	94
Steel Furnaces	27
Insurance (see under Sociological).	
Iridium	39
L	
Labor in Mines and Mills.....	88
Lamps	79, 85
Law, Mining	153
Leaching (see under Cyanide, Gold, Silver, Copper, etc.).	
Lead—	
Chemistry	19
Geology	18
Metallurgy	19
Mines and Mining	18
Miscellaneous	19
Ore Dressing	19
Production	94
Legislation, Mining	153
Lighting in Mines and Mills	79
Lignite (see under Coal).	
Lime	61
Lining (Furnace)	122
Lixivation	106
Locomotives (see under Haulage).	
Lubrication (see under Power and Machinery).	

SUBJECT INDEX

xxv

M	P	Q
Machinery 133	Organization, Business 155	Quartz 68
Magnetic and Electrostatic Ore Dressing (see under Mill and Milling).	Osmium 38	Quicksilver (see Mercury).
Magnets, Lifting (see under Hoisting and Haulage).	Overwinding (see under Hoisting).	
Management 88		
Manganese 32	Packing in Mines 79	R
Production 94	Paints 67	
Mechanical Coal Cutters 50	Palladium 38	
Mercury	Peat 54	
Production 94	Production 94	
Metallurgy 115	Petroleum—	
Copper 12	General and Miscellaneous 59	
General and Miscellaneous 124	Geology 56	
Gold 4	Mining 56	
Iron and Steel 24	Oil Fields 56	
Lead 19	Products 68	
Silver 10	Production 94	
Thermic 117	Uses 58	
Tin 35	Phosphate 67	
Zinc 22	Production 94	
Metal Spraying 39	Phtisis (see under Sanitation).	
Metallography (Iron and Steel) 29	Pigments 67	
Metals	Pillar Working 78	
Heat Treatment 39	Pipe Lines (see under Petroleum).	
Miscellaneous 7, 38	Placer Mining and Machinery (see under Gold).	
Miscellaneous, Unclassified 39	Platinum 11	
Testing of 122	Production 94	
Meters (see under Power and Machinery).	Planes, Inclined 81	
Mica 67	Pockets and Bins (see under Storage).	
Production 94	Potash 67	
Mill and Milling 98	Production 94	
Mill Lighting 79	Power and Machinery 128	
Mill: Miscellaneous and General 106	Power and Machinery Miscellany 138	
Mill Waters 75	Power Shovels 90	
Mills, Tube (see under Crushing).	Precious Metal Treatment 117	
Mine and Safety Lamps 79	Precious Stones (see Gems).	
Mine Gases 77	Precipitation (see under Cyaniding).	
Mine Miscellany 91	Producer Gas 138	
Mine Telephones 80	Production, Mineral 94	
Mine Waters 75	Promotion 155	
Mineral Production 94	Props 78	
Mineralization (see Ore Genesis).	Prospects and Prospecting 70	
Mines and Mining 70	Pulverizing (see under Reduction).	
Mining Geology 153	Pumps and Pumping 75	
Mining Law 153	Pyrite 68	
Mining Legislation 153	Pyrometry 122	
Mining Taxation 153		
Molybdenum 33		
Motor Trucks and Tractors 142		
Motors (see under Power and Machinery).		
N	Q	R
Natural Gas 60	Quartz 68	
Production 94	Quicksilver (see Mercury).	
Nickel 35		
Production 94		
Nitrates 67		
Nitric Acid 64	Radio-Actives 38	
Nitrogen 67	Radium 38	
Non-Ferrous Alloys 31	Rare Earths 38	
	Reduction 98	
O	Refining 4, 10, 115, 117	
Oil Engines 135	Refractories 122	
Oils (see Petroleum).	Rescue 85	
Ore Dressing—	Reservoirs (see under Petroleum).	
Concentration 100	Roasting 27, 28, 117	
Gold 4	Rolls (see under Crushers).	
Iron 26	Rotary Pumps (see under Pumps).	
Lead 19		
Mill and Milling 98		
Reduction 98		
Silver 10		
Tin 35		
Zinc 22		
Ore Genesis 142		
S		
	Safety Lamps 79	
	Safety, Mines and Mills 85	
	Salines 68	
	Sampling 98	
	Sand 61	

SUBJECT INDEX

Sanitation	85	Thermic Metallurgy (Continued)—	
Sand-Lime Products	61	Lining	122
Sapphires	69	Pyrometry	122
Schools and Societies	155	Refractories	122
Screening, Coal	47	Slags	121
Shafts and Shaft Sinking	74	Walls	122
Shovels, Power	90	Thickeners (see under Cyaniding).	
Silver—		Thorium	88
Chemistry	10	Tile	61
Cyaniding	10	Timber and Timbering	78
Geology (see also under Geology)	8	Tin	85
Metallurgy	10	Production	94
Mines and Mining	8	Tipples	47
Ore Genesis (see under Ore Genesis)		Titanium	88
Production	94	Tractors	142
Signalling	80	Transportation	142
Silicates	68	Trestles (see under Haulage).	
Sinking and Driving	74	Trucks, Motor	142
Sizing	100	Tube Mills (see under Crushing).	
Skips (see under Hoisting).		Tungsten	33
Slags	131, 141	Production	94
Slate	61	Tunnelling	75
Slimes (see under Cyaniding).		Tunnels	75
Sludge	141	Turbines (see under Pumps).	
Sluicing	90		
Smelting and Refining—			
Copper	12	U	
Electrometallurgy	115	Uranium	83
Furnace Practice	27		
Gold	4		
Silver	10	V.	
Thermic Metallurgy	117	Vanadium	34
Soapstones	69	Ventilation	77
Societies, Mining and Metallurgical	155		
Sociology	88		
Sorting	100	W	
Steam and Steam Engines	136	Wages (see under Labor).	
Steam Hoisting (see Hoisting).		Walls (Furnace) and Lining	122
Steels	24	Washing	100
Stone	61	Waste Waters, Disposition	142
Stoping	75	Wastes, Disposition	141
Storage	142	Water, Mine and Mill	75
Stowing	79	Waters, Waste	141
Stripping	90	Winding (see under Hoisting).	
Structurals and Ceramics	61	Wood Preservation (see under Timbers).	
Sulphur	68	Workmen's Compensation (see under Labor).	
Sulphuric Acid	64		
Supports	78		
Surveying	70		
T			
Talc	69	Z	
Tailings	141	Zinc—	
Tanks (see under Storage).		Chemistry	22
Taxation, Mining	153	Geology (see also under Geology,	
Technology—		p. 147).	
Chemistry and Assaying	109	Metallurgy	23
Metallurgy	115	Mines and Mining	21
Mill and Milling	98	Miscellaneous	23
Mines and Mining	70	Ore Dressing	23
Power and Machinery	51	Production	94
Telephones, Mine	80		
Testing	122		
Thermic Metallurgy	117		
Charging	121		
Discharging	121		
Flue Dust	122		
Fuels and Combustion	121		
Fume	122		
Gas	122		

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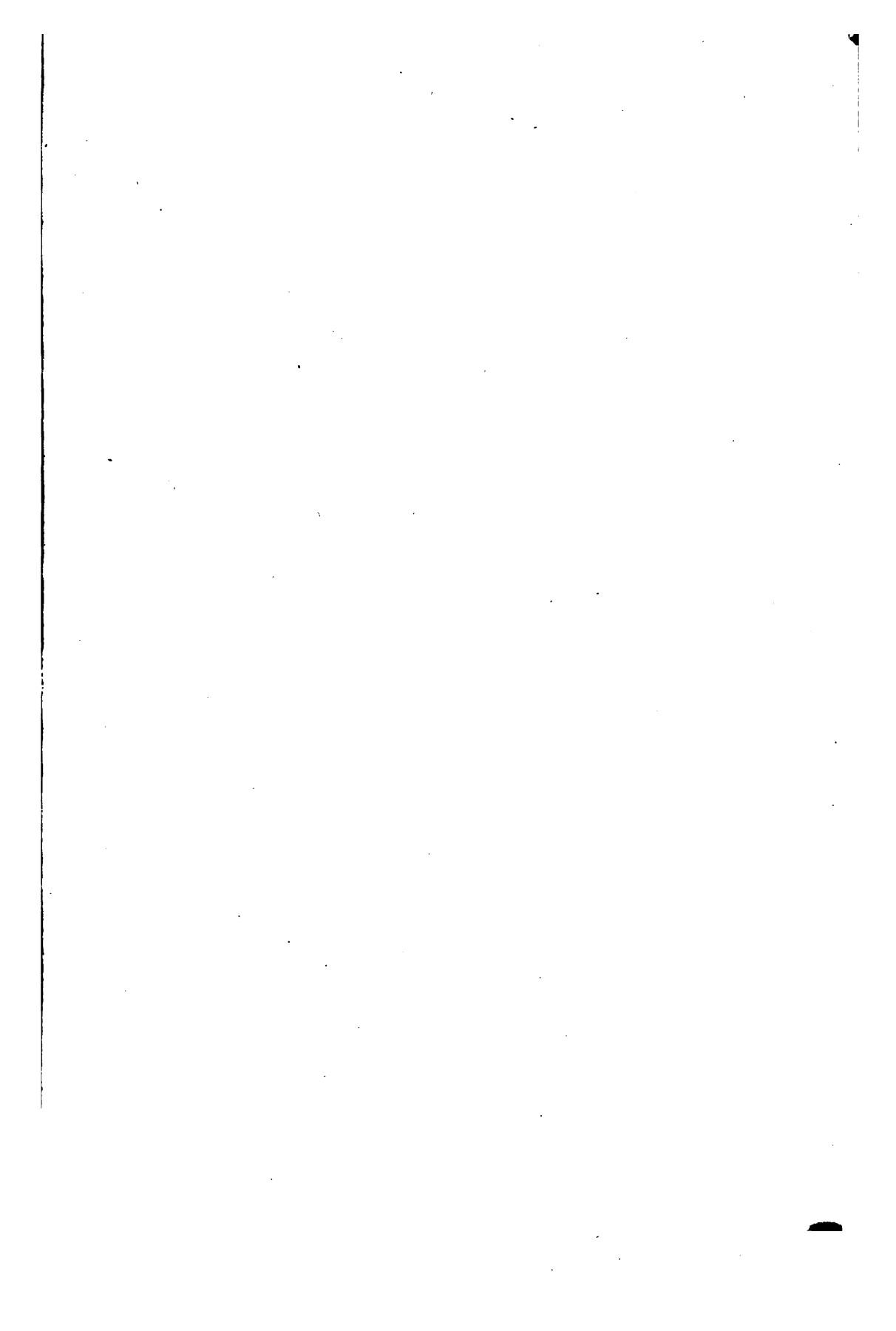
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